

who ought to know perfectly well what does really happen. I do not think it is necessary to introduce any remedy for this in the Bill, but I am perfectly prepared to remedy it by a rule setting forth that in any case in which an application is made to the Government of Bengal for direction to demolish these jetties, no order shall be passed upon it until an opportunity has been given to the persons concerned of being heard. And, so far as I am myself concerned, I pledge this Government to carry that out.

"We have received, besides the memorial from the Chamber of Commerce, a memorial from the British Indian Association. That memorial covers a very large area of ground; it goes into the question of the rights of riparian owners all over Bengal. Now, I say emphatically that the questions raised by the British Indian Association do not arise in connection with this question. The question is a very difficult one, and may be a very important one; but this Bill at all events is not the occasion on which to discuss it. It does not arise necessarily out of anything in this Bill, and 'sufficient to the day is the evil thereof.' When the time comes for raising the discussion, I have no doubt the British Indian Association will put their views before us in full form and with full force. But as I said before, after giving their memorial all consideration, I find that really it at no point touches the question that now comes before us.

"The only question remaining is, that as between the amendment proposed by the Hon'ble Mr. Moore and the amendment proposed by the member in charge of the Bill. I am bound to say that the alterations which the Hon'ble Mr. Moore has now made in his amendment, have taken away a very considerable amount of objection to it. But, on the whole, I think that the Hon'ble Sir Henry Harrison's amendment is, if not in appearance, in reality more liberal, because it does not pretend to define the circumstances under which compensation may be claimed as the Hon'ble Mr. Moore's does; and I think the Hon'ble Sir Henry Harrison's amendment the more convenient one and a better drafted one, and I myself prefer it."

The Hon'ble Mr. MOORE moved that the following revised section be substituted for section 85 of the Bill:—

"85. In case any wharf, quay, stage, jetty, pier, erection or mooring may have been or hereafter shall be, made, erected, or fixed within or without high-water-mark without the limits of the port, and thereafter the limits for the time being of the port shall be extended so as to include the place on which such wharf, quay, stage, jetty, pier, erection or mooring shall have been made, erected, or fixed, it shall be lawful for the Commissioners, when in the opinion of the Local Government the safety of navigation, or the improvement, maintenance or good government of the port so requires, to remove, fill up, or destroy such wharf, quay, stage, jetty, pier, erection or mooring:

Provided that when any such work has, under this section, been so dealt with, the Commissioners shall, when such work was made on behalf of the public for the convenience of public traffic, make or provide for the use of the public such sufficient wharves, quays, stages, jetties, piers, erections or moorings as the Local Government may direct, and shall, when such work was lawfully made by any private person for the convenience of private traffic—

(a) on land belonging to the Government, with the previous consent of the Local Government in writing, or of which the making, erecting, or fixing has been subsequently sanctioned by the Local Government in writing; or

(b) on land belonging to the private owner, whether acquired by grant from the Government, or by prescription, or otherwise,

make compensation therefor to the owners thereof to such an amount as may be determined by agreement by and between the Commissioners and such owners, or by the Civil Court in which a suit may be brought to establish and enforce such right of compensation."

The amendment being put, the Council divided:—

Ayes.

The Hon'ble Raja Rameshwar
Sing Bahadur.
The Hon'ble H. Pratt.
The Hon'ble C. H. Moore.
The Hon'ble F. B. Peacock.

Noes.

The Hon'ble Dr. Rash Behary
Ghose.
The Hon'ble Shahzada Mahommed
Furrokh Shah.
The Hon'ble Sir Alfred Croft.
The Hon'ble Sir Henry Harrison.
The Hon'ble T. T. Allen.
The Hon'ble P. Nolan.
The Hon'ble Sir Charles Paul.
His Honour the President.

So the Motion was lost.

The Hon'ble SIR HENRY HARRISON's amendment that, for section 85 of the Bill, the section as proposed by him be substituted, was put to the vote and agreed to.

The Hon'ble MR. NOLAN, by leave of the Council, withdrew the following motion of which he had given notice:—

'That the existing law on the subject, as contained in section 57 of Act V of 1870, be left unaltered. Section 85 of the Bill will then run as follows:—

'In case any wharf, dock, quay, jetty, pier, erection or mooring shall, after the seventeenth day of October, 1870, without the consent in writing of the Lieutenant-Governor of Bengal, have been fixed, excavated, erected, or built below high-water-mark without the limits for the time being of the port, and thereafter the limits of the port shall be extended so as to include the place in which such wharf, dock, quay, jetty, pier, erection or mooring shall have been fixed, excavated, erected or built, it shall be lawful for the Commissioners to remove, fill up, or destroy such wharf, dock, quay, jetty, pier, erection or mooring without making any compensation therefor.'

The Hon'ble SIR HENRY HARRISON moved that, between sections 85 and 86 of the Bill, the following section be inserted:—

'85 A. Whenever any wharves, quays, stages, jetties, piers, erections or moorings have, under the last preceding section, been removed, filled up, or destroyed, the Commissioners shall make or provide for the use of the public such sufficient and convenient wharves, quays, stages, jetties, piers, erections or moorings in the place of those that may be removed, filled up, or destroyed, as the Local Government may direct.'

The Motion was put and agreed to.

The further consideration of the Bill was postponed till the next sitting of the Council.

The Council adjourned to Saturday, the 22nd February, 1890.

CALCUTTA;

The 20th February, 1890.

C. H. REILY,

Assistant Secretary to the Govt. of Bengal,
Legislative Department.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 22nd February, 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.																
BENGAL.																			
Western Districts.																			
BURDWAN DIV.	1 Burdwan Feb. 22, '90	Nil	Weather—rather warm. Prospects of <i>rubbi</i> crops favourable. Sugarcane promising. Potato almost fair. Prices of common rice :— <table><tr><td>Burdwan</td><td>...</td><td>...</td><td>18</td></tr><tr><td>Culna</td><td>...</td><td>...</td><td>16</td></tr><tr><td>Cutwa</td><td>...</td><td>...</td><td>16½</td></tr><tr><td>Ranigunge</td><td>...</td><td>...</td><td>20</td></tr></table> } per rupee.	Burdwan	18	Culna	16	Cutwa	16½	Ranigunge	20
	Burdwan	18															
	Culna	16															
	Cutwa	16½															
	Ranigunge	20															
2 Bankoora „ 22, '90	Nil	Weather—getting warm. <i>Rubbi</i> crops coming on well; a ten-anna outturn is expected. Pressing of sugarcane proceeds; outturn 13½ annas. Common rice 19 seers per rupee at Sudder and 20 seers at Bishenpore.																	
3 Birbhum „ 22, '90	Nil	Weather—warmer. Prospects of crops fair. Common rice selling at 17 to 20 seers per rupee.																	
4 Midnapur „ 22, '90	Nil	Weather—getting warm. General prospects good. <i>Rubbi</i> being gathered in the Sudder subdivision. Prospect fairly good. Indigo doing well. Prices of rice :— <table><tr><td>Sudder</td><td>...</td><td>...</td><td>18</td></tr><tr><td>Contai</td><td>...</td><td>...</td><td>20</td></tr><tr><td>Tamluk</td><td>...</td><td>...</td><td>18</td></tr><tr><td>Ghatal</td><td>...</td><td>...</td><td>20</td></tr></table> } per rupee.	Sudder	18	Contai	20	Tamluk	18	Ghatal	20	
Sudder	18																
Contai	20																
Tamluk	18																
Ghatal	20																
5 Hooghly „ 22, '90	Nil	Weather—seasonable. <i>Rubbi</i> yielding good outturn. Prices of common rice :— <table><tr><td>Sudder</td><td>...</td><td>...</td><td>12½</td></tr><tr><td>Serampore</td><td>...</td><td>...</td><td>14</td></tr><tr><td>Jehanabad</td><td>...</td><td>...</td><td>17½</td></tr></table> } per rupee.	Sudder	12½	Serampore	14	Jehanabad	17½					
Sudder	12½																
Serampore	14																
Jehanabad	17½																
	Howrah „ 22, '90	Nil	Weather—warm in the day, cool at night. Transplantation of <i>boro</i> paddy completed. Prospects good. Prices of common rice :— <table><tr><td>Howrah</td><td>...</td><td>...</td><td>12½</td></tr><tr><td>Uluberia</td><td>...</td><td>...</td><td>16</td></tr></table> } per rupee.	Howrah	12½	Uluberia	16								
Howrah	12½																
Uluberia	16																
Central Districts.																			
PRESIDENCY DIV.	6 24-Pergas. Feb. 22, '90	Nil	Weather—seasonable. Good <i>amun</i> crop has been harvested. Winter crops are being harvested, and promise well. <i>Boro</i> rice doing well. Price of common rice 16 seers per rupee.																
	7 Naddea „ 22, '90	Nil	Weather—seasonable. Prospects of crops on the ground favourable. Linseed, mustard, and tobacco being harvested. Cultivation of land for <i>amun</i> going on. Rain wanted.																
	8 Khoolna „ 22, '90	Nil	Weather—warm during the day, but cool at night. State of <i>boro</i> and <i>rubbi</i> crops fair.																
	9 Jessore „ 22, '90	Nil	Weather—days hot, but nights cold. Ploughing of rice lands and harvesting of winter crops going on. Outturn of linseed expected to be 12 annas. Prices of rice stationary.																
	10 Moorshedabad „ 22, '90	Nil	Weather—cool and clear. <i>Rubbi</i> harvesting has begun.																
	11 Dinagepur „ 22, '90	Nil	Weather—days hot, but nights cool. Harvesting of <i>amun</i> rice nearly over. Land is being ploughed for <i>bhadoi</i> . Harvesting of winter crops and pressing of sugarcane continue.																
	12 Rajshahye „ 22, '90	Nil	Weather—hot in the day, but cool at night. Harvesting of <i>amun</i> paddy over in the Nattore subdivision with an average outturn of 10 annas only. Prospects of <i>rubbi</i> crops good generally. Ganja manufacture continues at Nowgong. Rice sells at 17 seers 2 chittacks per rupee.																
	13 Rangpur „ 22, '90	Nil	Weather—hot days, but cool nights. Mustard is being gathered with a fair outturn. Other standing crops are promising. Ploughing operations are in active progress.																
	14 Bogra „ 22, '90	Nil	Weather—seasonable. Land is being ploughed for <i>amun</i> paddy and jute. State of standing crops (such as peas, linseed, gram, &c.) reported to be good. Common rice selling at 22 seers per rupee.																
	15 Pabna „ 22, '90	Nil	Weather—seasonable. Mustard and tobacco expected to be 12-anna crops. Sugarcane deficient. Rain wanted, especially for <i>cheena</i> and <i>keon</i> .																
RAJSHAHYE DIV.	16 Darjeeling „ 22, '90	Nil	Weather—fair. Wheat and barley progressing favourably. In Terai, land is being prepared for <i>bhadoi</i> crops and jute. Price of common rice continues the same as in last week, viz.,— <table><tr><td>Darjeeling</td><td>...</td><td>...</td><td>12</td></tr><tr><td>Kurseong</td><td>...</td><td>...</td><td>13</td></tr><tr><td>Siliguri</td><td>...</td><td>...</td><td>19</td></tr></table> } per rupee.	Darjeeling	12	Kurseong	13	Siliguri	19				
	Darjeeling	12															
Kurseong	13																
Siliguri	19																
17 Julpigoree „ 22, '90	Nil	Weather—seasonable. Tobacco crop injured by hail in the northern taluks of Mynagori tahsil, but in other places it is favourably reported on. No change in prices.																	

No.	District and date of return.	Rainfall at rudder station in inches.	Character of the weather and state and prospects of the crops.
BENGAL—concluded.			
<i>Eastern Districts.</i>			
Dacca Divn.	18 Dacca Feb. 22, '90	Nil	Weather—days getting warm, but nights cool. Winter crops doing well. <i>Cheena</i> and <i>kaon</i> being sown. Mustard and sugarcane being cut. Fodder is available. No special change in the prices of food-grains. Common rice 13 to 14½ seers per rupee.
	19 Furraddpur „ 22, '90	Nil	Weather—growing warm; night of 17th especially sultry. Mustard nearly picked; outturn 10 annas. Other <i>rabbi</i> crops promise fairly, as also <i>jute</i> rice. Cultivation for <i>aus</i> rice and <i>til</i> in progress. Sugarcane and date-jute being made into molasses. Coarse rice selling at 16 seers per rupee at Budder and Goalundo, and at 15 seers per rupee at Madaripur.
	20 Backergunge „ 22, '90	Nil	Weather—seasonable. Prospects of <i>rabbi</i> crops good. Rain wanted. Common rice sells at 14 seers a rupee.
	21 Mymensingh „ 22, '90	Nil	Weather—seasonable. Cultivation of <i>aus</i> and <i>jute</i> in some lands has begun. Mustard is still being cut. Pulses, viz., <i>mug</i> , <i>ekesari</i> , and <i>matar kalesi</i> , ripening. Coarse rice is being sold at 13 seers 14 chittacks per rupee.
Chittagong Divn.	22 Chittagong „ 22, '90	Nil	Weather—seasonable. The state of winter crops good, but rain is wanted in the south, where weather is reported unsettled.
	23 Noakhally „ 22, '90	Nil	Weather—getting warm; occasionally cloudy. Harvesting of <i>rabbi</i> crops and ploughing of land for <i>aus</i> commenced. Rain wanted in some places. Price of rice stationary.
	24 Tipperah „ 22, '90	Nil	Weather—rather warm for this time of the year. <i>Chillies</i> being reaped. Other winter crops (pulses, &c.) thriving. Rice selling at from 14½ to 16 seers per rupee.
	25 Chittagong Hill Tracts „ 21, '90	Nil	Weather—cold in the morning throughout the week. Gathering of mustard continues; outturn estimated at about 6 annas. Tobacco and <i>chillies</i> doing well. <i>Jowar</i> cutting has commenced in some places. Best and middle class rice selling at 12 seers 5 chittacks and 13 seers 14 chittacks per rupee respectively.
BEHAR.	Hill Tipperah „ 22, '90	Nil	Weather—getting warm. Sugarcane and tobacco still being cut. Mustard being gathered. <i>Jowar</i> still being cleared in the hills.
	26 Patna „ 22, '90	Nil	Weather—days warm, but nights cool. Wheat and barley have not yet ripened. Other spring crops are being reaped. Collection of opium continues. Prospects favourable. Prices of food-grains almost stationary.
	27 Oye „ 22, '90	Nil	Weather—getting warm in the day. <i>Rabbi</i> crops arriving to maturity. Mustard, <i>masuri</i> , and gram being reaped. Extraction of opium going on. Food-stocks sufficient.
	28 Shahabad „ 22, '90	Nil	Weather—days hot, nights still cool. Pulses being gathered with fair outturn. Other <i>rabbi</i> crops promising. Prospects of opium crop good. Prices of food-grains stationary.
PATNA Divn.	29 Darbhanga „ 22, '90	Nil	Weather—days getting warm. Wheat, barley, and linseed approaching maturity; outturn estimated at 12 annas on an average. Poppy blossoming, and prospects continue good. Mustard being reaped. Mango trees are abundantly in flower. Common rice selling at 19½ seers per rupee.
	30 Masoherpur „ 22, '90	Nil	Weather—warmer with west wind. Condition and prospects of <i>rabbi</i> crops good. Outturn of mustard from 12 to 16 annas.
	31 Saran „ 22, '90	Nil	Weather—getting hot. <i>Rabbi</i> and poppy crops doing well, and give favourable prospect. Lands in churs are being prepared for paddy.
	32 Champaran „ 22, '90	Nil	Weather—bright and warm; occasionally stormy with high west wind. <i>Rabbi</i> ripening; reaping will commence in the next fortnight. Poppy well in flower and keeping healthy.
BHAULPORE Divn.	33 Monghyr „ 22, '90	Nil	Weather—seasonable. Harvesting of mustard and pulses going on. Wheat and barley ripening. Indigo being sown in the Begusarai subdivision. Prices of food-grains almost stationary.
	34 Bhagalpur „ 22, '90	Nil	Weather—getting warmer. It is now too late for rain to do good, and the <i>rabbi</i> crop must be a light one. Cereals on <i>dearals</i> may yield 10 to 12 annas, but on high lands will be below 8 annas. Pulses very fair. Mango blossoms profuse.
	35 Purneah „ 22, '90	Nil	Weather—days rather warm with west wind. Tobacco being gathered. All <i>rabbi</i> crops doing well. Ploughing going on.
	36 Maldah „ 22, '90	Nil	Weather—days getting warmer, but nights still cool. Gathering of <i>kalesi</i> and mustard over, except in one or two places. The outturn is expected to average about 12 annas, but from thanas Gumastapur and Bholahat it is reported to be about 8 annas. Transplantation of <i>bore</i> paddy going on; in some places the plants are up. Prospects of other standing crops good, but damage is apprehended for want of rain. Common rice selling at an average of 18 seers per rupee.
	37 Sonthal Perghe „ 22, '90	Nil	Weather—becoming warmer. <i>Rabbi</i> crops doing well. <i>Bore</i> paddy being planted. Mango trees full of blossom.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
ORISSA DIV.	38 Cuttack Feb. 22, '90	Nil	Weather—fine. Tobacco doing well. General prospects continue good.
	39 Poores „ 21, '90	Nil	Weather—seasonable. Threshing of winter crop (late <i>sarad</i>) still continues. <i>Dalua</i> crop has come up in places. Prices of rice stationary.
	40 Balasore „ 22, '90	Nil	Weather—warm for the time of year. <i>Rabbi</i> crops doing fairly well.
CHOTA NAGPORE.			
South-West Frontier Agency.			
CHOTA NAGPORE DIV.	41 Hasaribagh Feb. 22, '90	Nil	Weather—seasonable. Full <i>rubb</i> crop expected except in Chowparan. Poppy prospects favourable.
	42 Lohardugga „ 22, '90	Nil	Weather—days hot, mornings cool. Prospects of <i>rubb</i> crops favourable at headquarters. In Palamow, wheat tolerably developing; musoor, peas, and mustard being harvested; <i>rubb</i> greatly damaged by frost.
	43 Singbhoom „ 22, '90	Nil	Weather—warm. Pulses, oilseeds, and wheat all thriving. Full crop expected. Prices stationary.
	44 Manbhoom „ 22, '90	Nil	Weather—hotter. Spring crops doing well, except <i>arhar</i> , of which the output is estimated to be from 8 to 10 annas.

Published for general information.

CALCUTTA ; REVENUE DEPT.,
The 25th February, 1890.

P. NOLAN,
Secy. to the Govt. of Bengal.

**PRICES-CURRENT (*RETAIL*) OF FOOD-GRAINS, FIREWOOD AND SALT IN THE
HEAD-QUARTER STATION BAZARS OF THE DISTRICTS OF BENGAL
DURING THE FORTNIGHT ENDING THE
15TH FEBRUARY 1890.**

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

		QUANTITIES PER RUPEE IN																			
		WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLU. (Sorghum Vulgare.)							
Number.	DISTRICTS.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.		
BENGAL.																					
Western Districts.																					
1	Bardwan	14 8	14 8	12 0	No sale.			14 4	12 12	15 0	17 1	16 14	18 0	...	...	...	...	...	...
2	Bankoora	14 8	14 8	12 8	14 0	14 0	15 0	17 8	17 8	17 8	21 4	21 0	20 0	...	...	...	...	...	...
3	Beerbhoom	16 0	16 8	11 0	...	...	...	13 8	13 8	13 0	16 8	16 8	15 12	...	...	...	...	...	...
4	Midnapore	13 0	13 0	10 0	...	...	...	14 0	12 8	15 0	18 0	17 0	20 0	...	...	...	...	...	...
5	Hooghly	13 0	13 0	13 0	...	...	...	8 0	8 0	10 0	13 0	13 0	13 0	...	...	...	...	...	...
	Howrah	...	...	...	...	...	...	11 8	9 8	12 0	14 8	14 0	15 2	...	...	...	...	...	...
Central Districts.																					
	Calcutta	13 9	13 12	12 6	17 2	18 0	14 14	9 1	9 2	9 7	13 15	13 14	14 12	21 0	20 3	16 0	...	...	...
6	24-Pergunnahs	14 8	15 0	13 4	16 0	16 0	16 0	9 0	9 0	8 0	17 0	16 8	16 8	...	...	...	...	...	...
7	Nuddea	15 0	15 0	14 0	17 12	17 12	17 12	10 10	10 10	13 5	12 14	12 14	17 14	...	...	...	...	...	...
8	Khoolna	...	...	...	...	...	...	14 0	13 0	16 0	16 0	16 0	18 0	...	...	...	...	...	...
9	Jessore	12 12	12 12	12 0	...	...	...	9 0	9 0	14 0	16 0	16 0	18 0	...	...	...	...	...	...
10	Moorshedabad	16 0	16 0	13 5	...	...	...	15 8	15 8	13 5	16 0	16 0	16 0	...	...	...	...	...	...
11	Dinapore	17 6	16 0	12 0	20 0	19 0	10 0	15 8	14 0	13 8	19 9	19 0	17 0	...	...	...	...	...	...
12	Rajahmhye	16 8	15 12	13 8	22 8	18 12	20 4	15 0	14 4	14 4	16 2	16 2	15 15	...	...	...	...	...	...
13	Rungpore	13 5	14 8	12 4	...	...	...	9 6	9 6	10 8	14 8	14 8	16 0	...	...	...	...	...	...
14	Bogra	{ Best. 12 0 12 5 Common. 15 0 16 8 }		9 15	...	...	...	12 0	12 0	13 8	19 2	18 12	19 8	...	...	...	...	...	...
15	Pubna	15 0	13 5	15 12	...	...	...	6 12	7 2	7 8	16 4	16 8	18 0	...	...	...	...	...	...
16	Darjeeling	10 0	10 0	10 0	9 0	10 0	6 0	5 0	5 8	6 0	12 0	10 0	13 0	...	...	...	...	...	...
17	Julpigorne	13 0	13 0	10 0	16 0	16 0	16 0	8 0	8 0	8 0	18 0	17 0	17 0	...	...	...	...	...	...
Eastern Districts.																					
18	Barasat	13 0	13 0	15 8	16 0	16 0	20 0	14 0	14 0	15 0	16 0	16 0	17 0	...	...	...	...	...	...
19	Furzedpore	12 0	12 0	16 0	14 0	12 0	20 0	10 0	10 0	9 0	14 0	14 0	16 0	...	...	...	...	...	...
20	Backergunge	...	...	...	...	...	...	12 13	13 5	13 8	15 0	16 0	16 0	...	...	...	...	...	...
21	Mymensingh	10 0	11 8	10 0	...	...	...	8 0	10 8	13 0	14 0	14 0	18 0	...	...	...	...	...	...

A In subdivisions retail prices of salt per rupee are:—Cutwa 10 seers, Cutwa 10 seers 6 chittacks, and Manegunge 10 seers.

B At Rampore Haut retail price of salt 10 seers per rupee.

C In subdivisions retail prices of salt per rupee are:—Ghatal 10½ seers, Tumlook 8 seers, and Contal 9 seers.

D In subdivisions retail prices of salt per rupee are:—Serampore 10 seers and Jehanabad 10 seers.

E In subdivisions retail prices of salt per rupee are:—Barasat 9 seers, Basirhat 9 seers, Diamond Harbour (at Magrahat) 10 seers, Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.

F In subdivisions retail prices of salt per rupee are:—Koochla 10 seers, Meherpore 10½ seers, Choudanga 9 seers, and Ranaghat 9 seers 2 chittacks.

G In subdivisions retail prices of salt per rupee are:—Sankhira 9 seers and Bagirhat 8 seers.

H In subdivisions retail prices of salt per rupee are:—Jhonida 9 seers, Magura 9½ seers, Narail 9½ seers, and Bongong 10 seers.

I In subdivisions retail prices of salt per rupee are:—Lalbagh 10½ seers and Kandi 1½ seers.

BAJRA OR CUMBU. (<i>Pennisetum typho-</i> <i>iloneum.</i>)	MARUA OR RAHL (<i>Alouisia Corocana.</i>)
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Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
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[illegible]

KANGKI OR KANGU, ITALIAN MILLET. (<i>Setaria italica</i> .)			GRAM, CHANA, CHHOLA, KADALA OR HUMAGA. (<i>Cicer arietinum</i> .)		
Present return.	Next preceding turn.	Corresponding turn of last year.	Present return.	Next preceding turn.	Corresponding turn of last year.

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...	19	0	20	0	15	...	...	...
...	17	8	16	4	14	...	...	...
...	17	4	16	0	14	...	...	...
...	16	0	16	0	13	...	...	...
...	16	0	16	0	13	...	...	...
...	16	12	16	12	15	...	...	...

11	14	15	14	17	8	16	12	16	9	14	...
6	8	6	8	13	4	19	8	18	13	18	...
...	...	...	...	20	0	20	0	13	...	...	...
...	...	...	...	12	0	12	0	13	...	...	...
...	...	...	...	16	0	16	0	14	...	...	...
...	...	...	...	20	0	21	0	18	...	...	...
...	...	...	...	15	8	14	4	13	...	...	...
...	...	...	...	13	0	18	12	14	...	...	...
...	...	...	...	14	8	14	8	10	...	...	...
...	...	...	...	12	0	13	0	11	...	...	...
...	...	...	...	16	0	15	12	13	...	...	...
...	...	...	...	19	0	10	0	11	...	...	...
...	...	...	...	13	0	13	0	11	...	...	...

...	...	...	...	13	0	13	0	11	...	...	...
...	...	...	...	11	0	11	0	10	...	...	...
...	...	...	...	15	0	15	0	10	...	...	...
...	...	...	...	13	0	14	8	10	...	...	...

Head-quarter Station Bazars of the Districts of Bengal on the 15th February 1890.

												WHOLESALE PRICES PER MAUND OF 40 SEERS.						DISTRICTS.
INDIAN-CORN OR MAIZE (Zea Mays.)			ARAR OR THUR, CADJAN PRA. (Cajanus indica.)			FIREWOOD.			SALT.			SALT.						
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.				
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. a. p.	Rs. a. p.	Rs. a. p.				
No sale.			19 0	20 0	20 0	00 0	100 0	107 0	A	10 0	10 0	10 7 1/2	3 11 0	3 11 0	3 11 0	Burdwan.		
29 0	28 0	20 0	20 0	17 8	18 8	280 0	28 0	28 0	10 0	10 0	10 0	3 15 0	3 15 0	3 14 0	Bankoora.			
...	12 0	10 8	12 0	160 0	160 0	...	B	10 8	10 8	10 0	3 19 0	3 19 0	3 13 0	Beerbhoom.		
...	13 8	13 8	21 0	160 0	64 0	60 0	C	10 8	10 8	10 4	3 15 0	3 15 0	3 14 0	Midnapore.		
...	11 0	11 0	13 0	120 0	120 0	120 0	D	9 0	9 0	9 0	3 11 0	3 11 0	4 6 0	Hooghly.		
...	13 8	13 4	13 0	100 0	100 0	100 0	10 0	10 0	10 8	3 13 0	3 13 0	3 11 0	Howrah.			
Central Districts.																		
18 2	18 2	16 0	17 11	17 12	16 10	100 0	100 0	100 0	10 2	10 2	10 5	3 11 0	3 11 0	3 9 7	Calcutta.			
...	17 0	20 0	18 0	100 0	100 0	100 0	E	10 0	10 0	3 9 6	3 9 6	3 10 0	24-Pergunnah.			
...	20 0	20 0	20 0	...	...	...	F	9 2	9 2	9 2	3 14 0	3 14 0	3 14 0	Nuddea.		
...	16 0	160 0	16 0	G	8 0	8 0	9 2 1/2	4 4 0	4 4 0	4 0 0	Khoolna.		
...	16 0	16 0	22 0	160 0	16 0	160 0	H	9 3	9 2	4 0 0	4 0 0	4 0 0	Jessore.			
...	19 0	19 0	22 0	200 0	200 0	200 0	I	11 0	10 0	3 12 0	3 12 0	4 0 0	Moorsheadabad.			
...	10 0	...	...	16 0	16 0	16 0	J	9 8	9 8	4 0 0	4 0 0	4 0 0	Dinagopore.			
...	18 0	17 10	2 2	240 0	240 0	240 0	K	9 0	9 0	9 9	4 2 8	4 2 8	4 0 0	Rajahshye.		
...	9 6	9 6	10 5	100 0	100 0	120 0	L	8 14	8 14	9 6	4 8 0	4 8 0	4 4 0	Rungpore.		
...	90 0	90 0	96 0	9 0	9 0	8 4	4 4 0	4 4 0	5 0 0	Bogra.			
...	20 10	18 0	27 8	2 0	2 0	100 0	M	8 11 1/2	8 11 1/2	9 9	4 0 0	4 0 0	3 15 0	Pubna.		
16 0	18 0	18 0	8 0	8 0	...	120 0	120 0	120 0	N	8 0	8 0	8 0	5 0 0	5 0 0	5 0 0	Darjeeling.		
...	12 0	13 0	9 0	128 0	128 0	128 0	O	9 0	9 0	9 0	4 2 0	4 2 0	4 4 0	Julpigoree.		
Eastern Districts.																		
...	14 0	14 0	16 0	160 0	160 0	120 0	P	9 8	9 4	9 14	4 2 0	4 4 0	4 0 0	Dacca.		
14 0	15 0	20 0	11 0	11 0	12 0	120 0	120 0	120 0	9 0	9 0	10 0	4 4 0	4 4 0	3 14 0	Furreedpore.			
...	120 0	120 0	120 0	10 5	10 10	10 10	3 14 0	3 14 0	3 12 0	Backergunge.			
...	15 0	14 0	20 0	...	...	...	R	9 0	9 4	9 10	4 4 0	4 2 0	4 2 0	Mymensingh.		

J In Thakurgaon subdivision retail price of salt 8 seers per rupee.
K In subdivisions retail prices of salt per rupee are :—Natore 9 seers and Nowgong 8 seers 11 chittacks.
L In subdivisions retail prices of salt per rupee are :—Nilphamari 9 seers, Kurigram 9 seers, and Gaibanda 8 seers.
M At 8-rajaunge retail price of salt 10 seers per rupee.
N At Siftguri wholesale price of salt Rs. 4-4 per maund.
O At Fallacutta in the Alipore subdivision retail price of salt 8 seers per rupee.
P In subdivisions retail prices of salt per rupee are :—Maulickgunge 8 seers, Moonshoogunge 8 seers 14 chittacks, and Naraingunge 10 seers.
Q In subdivisions retail prices of salt per rupee are :—Patuakhali 9 seers, Bhola 8 seers, and Piroaspore 9 seers.
R In subdivisions retail prices of salt per rupee are :—Kishoragunge 8 seers, Jamalpore 10 seers, Sherepore 8 seers, and Notakong 8 seers.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the Head-quarter

Number.		DISTRICTS		QUANTITIES PER RUPEE IN														
				WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLU. (Sorghum Vulgare.)		
				Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
Eastern Districts—concluded.																		
22	Chittagong	11 0	11 0	11 0				12 0	11 0	12 0	15 10	15 11	16 5					
23	Noakhally							15 0	16 0	15 0	17 0	18 0	16 0					
24	Tipperah	12 5	11 7	12 8				Gobindabag. 10 0	10 0	17 0	16 0	16 0	19 0					
25	Chittagong Hill Tracts							12 4	2 4	11 6	14 0	14 0	13 5					
	Hill Tipperah	6 0	6 0	6 0				9 0	8 0	9 0	15 0	16 0	18 0					
BEHAR.																		
26	Patna	7 8	17 8	15 8	23 0	24 0	22 0	10 8	10 8	11 0	18 12	17 14	16 8	21 0	22 0	24 0		
27	Gya	15 8	15 8	18 0	23 0	23 0	18 0	10 8	10 8	10 0	17 0	17 0	15 0					
28	Shahabad	16 0	16 0	15 8	24 0	23 0	20 0	9 0	9 0	9 0	17 0	17 0	15 0	20 0	23 0	20 0		
29	Durbhanga	4 4	13 3	16 0	27 8	27 8	18 0	11 0	9 14	10 8	18 2	19 3	15 8					
30	Muzaffarpore	14 0	14 0	12 0	20 0	20 0		9 0	9 0	9 0	17 0	17 0	12 8					
31	Saran	15 8	15 8	15 0	21 0	21 8	9 0	9 4	8 12	17 0	17 0	14 6						
32	Chumpran	12 0	13 0	13 0	24 0		18 0	8 0	10 0	9 0	18 0	19 0	13 0					
33	Monghyr	17 14	18 10	16 0	21 0	21 0		15 12	16 12	13 2	18 14	19 11	18 8					
34	Bhagnipore	16 6	16 6	15 2	20 3	20 3	17 0	11 6	13 14	13 14	18 15	18 15	15 12					
35	Purneah	18 0	18 0	13 0				17 0	18 0	15 0	19 0	19 0	17 0					
36	Maldab	18 0	16 0	13 0				11 0	8 0	12 0	18 0	17 0	16 0					
37	Sonthal Pergna.	13 0	13 0	11 0				13 0	12 0	14 0	17 0	17 0	17 0					
ORISSA																		
38	Cuttack	13 2	11 13	13 2				10 8	10 8	11 13	21 0	22 8	17 1					
39	Pooree	13 2	13 2	13 2				17 1	15 12	11 13	23 10	23 10	17 1					
40	Balasore	15 0	15 0	13 0	13 0	13 0	13 0	13 0	12 0	19 0	19 0	20 0						
CHOTA NAGPORE																		
South-West Frontier Agency.																		
41	Hamarlingb	13 0	13 8	13 0	15 0	15 0		10 0	10 0	8 0	17 0	18 0	16 0					
42	Lehardugga	10 8	11 12	13 0	13 0			15 0	17 0	13 0	18 0	19 0	14 8					
43	Singhoom	10 0	10 0	13 0	13 0	15 0	14 0	16 0	16 0	16 0	19 0	20 0	20 0					
44	Manbhoom	13 5	13 5	13 5				15 0	14 0	14 8	21 0	20 0	21 8					

B At Penny Hat retail price of salt 8 seers per rupee.

C In subdivisions retail prices of salt per rupee are:—Buxar 10½ seers, Sasaram 10½ seers, and Bhawal 9½ seers.

D At Samastipur in the Tippera subdivision retail price of salt 11 seers per rupee.

E In subdivisions retail prices of salt per rupee are:—Hajipore 9½ seers and Sitamarhi 10 seers.

F At Bettiah retail price of salt 9½ seers per rupee.

CALCUTTA,
The 26th February, 1890.

KANONI OR KAKUN,
ITALIAN MILLET.
(*Sesaria italica*.)

(GRAM. CHANA,
CHHOLA, KADALAT
OR SHHADA.
(*Cicer arietinum*.)

Present return.	Next preceding turn.	Corresponding turn of last year.	Present return.	Next preceding turn.	Corresponding turn of last year.
-----------------	-------------------------	-------------------------------------	-----------------	-------------------------	-------------------------------------

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...	13	0	12	0	11	0
...	12	0	10	0	13	0
...	13	8	14	10	10	0
...
...	13	0	13	0	10	0

21	0	19	0	15	8	24	0	23	0	19	8
25	0	15	0	13	0	20	0	20	0	18	8
...	...	...	...	...	...	20	0	21	0	20	0
...	...	...	...	...	...	20	8	20	0	19	13
...	...	...	...	...	...	...	0	13	8	10	0
...	...	...	...	...	...	20	4	20	8	17	13
...	...	...	...	...	...	23	0	23	0	15	0
13	16	12	10	8	21	0	21	0	18	0	...
...	...	...	...	...	...	20	8	20	8	16	11
...	...	...	...	...	...	...	0	16	0	13	0
...	...	...	...	...	...	16	0	13	0	15	0
...	...	...	...	...	...	17	0	16	0	14	0

...	...	...	...	14	7	15	12	19	11
...	...	...	...	17	1	17	1	17	1
...	...	...	...	14	0	14	0	13	8

...	...	...	...	15	0	16	0	15	0
...	...	...	...	13	8	14	13	13	0
...	...	...	...	10	0	10	0	12	0
...	...	...	...	16	0	15	13	14	0

SEERS OF 80 TOLAHS

BAJRA OR CUMBU. (<i>Pennisetum typhoides</i> .)			MARUA OR RAGI. (<i>Eleusine Coracana</i> .)		
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding re- turn of last year.

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...
...
...
...

...	...	...	27	0	27	0	...	...	...
...
...
...
...	...	...	28	7	28	7	30	...	...
...
...
...	...	...	22	0	22	0	30	...	...
...
...
...
...
...
...
...

...
...
...

...	...	...	25	0	25	0	...	...	...
...
...
...
...	...	...	40	8	35	0	...	...	...
...
...
...

Station Bazars of the Districts of Bengal on the 15th February 1890—(concluded).

												WHOLESALE PRICES PER MAUND OF 40 SEERS.												DISTRICTS.
INDIAN-CORN OR MAIZE (Zea Mays.)			ARHAR OR TUR. CAJAN PEA. (Cajanus indicus.)			FIREWOOD.			SALT.			SALT												
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.							
Eastern Districts—concluded.																								
...	...	...	...	...	...	110	0 110	0 108	0 9 0	9 0	9 8	4 4	0 4	0 0	4 0	0 4	0 0	Chittagong.	
...	...	...	8 0	7 0	...	...	...	...	9 0	9 0	8 0	4 0	0 4	0 0	4 8	0 0	0 0	Noakholly.	
...	...	...	8 63	8 63	9 0	...	...	...	8 14	8 14	8 0	4 8	0 4	8 0	4 6	0 0	0 0	Tipperah.	
...	...	...	...	...	...	32	0 320	0 320	0 8 0	8 0	8 0	4 8	0 4	8 0	4 8	0 0	0 0	Chittagong Hill Practa.	
...	...	...	8 0	8 0	8 0	...	...	...	8 0	8 0	8 0	4 6	0 4	6 0	4 6	0 0	0 0	Hill Tipperah.	
BEHAR.																								
23	0 22	8 21	8 21	0 21	8 24	0 130	0 130	0 130	0 10	0 10	0 10	0 3	13	6 3	14	0 3	12	6	Patna.					
...	...	...	20	0 19	0 18	0 16	0 160	0 200	0 9 2	9 2	8 12	4 2	0 4	2 0	4 2	0 0	0 0	0 0	Gya.			
...	...	...	16	0 19	0 14	0 160	0 140	0 160	0 10	0 9	12 10	0 3	15	0 3	15	6 4	0 0	0 0	Shahabad.			
23	0 24	3 18	0 17	9 16	8 21	0 200	0 200	0 176	0 10	0 10	0 11	0 3	14	0 3	12	0 3	10	3	Darbhanga.					
26	0 25	0 17	0 18	0 18	0 20	0 160	0 160	0 160	0 10	0 10	0 10	0 4	0 0	4 0	0 0	3 12	0 0	0 0	Muzaffarpore.					
23	0 21	12 20	12 19	8 19	8 20	12 160	0 160	0 160	0 10	0 9	8 10	0 4	0 0	4 0	0 0	3 15	0 0	0 0	Sarun.					
24	0 24	8 18	0 17	0 17	8 22	0 160	0 160	0 160	0 10	0 10	0 9	8 4	1 0	4 1	0 4	1 0	0 0	0 0	Chumpan.					
21	0 22	1 16	4 16	12 16	12 17	5 47	0 47	147	0 9	11 9	11 9	8 4	0 0	4 0	0 0	4 0	0 0	0 0	Monghyr.					
22	6 22	11 17	0 16	6 17	11 17	0 176	12 164	0 176	8 10	1 10	1 10	...	3 15	6 3	15	6 4	0 0	0 0	Bhagalpore.					
...	...	...	16	0 16	0 16	0 120	0 120	0 200	0 9	9 0	9 0	4 7	0 4	7 0	4 5	0 0	0 0	0 0	Purnean.			
...	...	...	...	...	...	12	0 6	0 120	0 9	9 0	10 0	4 2	0 4	4 0	4 0	0 0	0 0	0 0	Maldah.
26	0 25	0 19	0 20	0 20	0 23	0 200	0 200	0 200	0 9	9 0	9 0	4 0	0 4	0 0	4 3	0 0	0 0	0 0	Sonhal Pergba.					
ORISSA.																								
...	...	...	14	7 14	7 17	1 80	0 80	0 80	0 11	0 11	0 11	0 3	12	0 3	12	0 3	12	0 0	Cuttack.			
...	...	...	15	12 15	12 15	12 80	0 80	0 80	0 11	13 11	13 11	3 6	0 3	6 0	3 6	0 0	0 0	0 0	Pooree.			
...	...	...	...	...	...	160	0 160	0 160	0 10	0 10	0 8	8 3	14	0 3	14	0 4	4 0	0 0	Balasore.
CHOTA NAGPORE.																								
South-West Frontier Agency																								
21	21	0 18	0 16	0 17	0 16	0 320	0 320	0 320	0 8	0 8	0 8	0 4	6	0 4	6	0 4	4	0	Hazaribagh.					
32	0 30	0 16	0 19	12 17	0 15	0 120	0 140	0 140	0 8	8 8	8 8	4 5	0 4	6 0	4 8	0 0	0 0	0 0	Lohardugga.					
20	0 24	0 13	0 13	0 15	0 140	0 240	0 200	1 8	8 8	8 8	8 0	4 12	0 4	12	0 5	0 0	0 0	0 0	Singbhoom.					
32	0 32	0 26	0 30	0 20	0 8	0 00	0 300	0 200	0 9	9 9	9 0	4 2	0 4	2 6	4 2	0 0	0 0	0 0	Manbhoom.					

X In subdivisions retail prices of salt per rupee are :- Begusarai 2½ seers and Jamui 9 seers.

Y At Kishangunga retail price of salt 8 seers per rupee.

Z In the Khoordah subdivision retail price of salt 11 seers per rupee.

Z1 At Bhadrak retail price of salt 9 seers per rupee.

Z2 At Govindpore retail price of salt 9 seers per rupee.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Salt

Number.	MARTS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 10 11	2 10 0	2 15 0	2 1 8	1 15 11	2 7 0	4 2 7	4 2 7	3 15 4	2 10 3	2 10 1	2 7 8
2	Seraingunge ...	2 2 0	2 4 0	2 10 0	—	—	—	4 10 0	5 8 0	3 14 0	2 12 0	2 10 0	2 10 0
3	Dacca ...	3 0 0	3 0 0	2 8 0	2 7 0	2 7 0	2 0 0	2 18 0	2 14 0	2 10 0	2 7 0	2 7 0	2 6 0
4	Narsingunge ...	—	—	—	—	—	—	2 12 0	3 0 0	2 6 0	2 8 0	2 12 0	2 4 0
5	Chittagong ...	3 8	3 8 0	3 9 0	—	—	—	3 4 0	3 8 0	3 4 0	2 8 6	2 9 0	2 10 0
6	Patna ...	2 4 0	2 4 0	—	1 10 6	1 10 0	1 12 0	3 12 0	3 12 0	3 8 0	2 1 0	2 4 0	2 7 0
		2 8 0	2 8 0	2 2 0									
7	Balasore ...	2 8 0	2 8 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 4 0	2 0 0	2 0 0	1 12 0
8	Pooree ...	—	—	—	—	—	—	—	—	—	1 12 0	1 12 0	2 2 6
9	Cuttack ...	3 0 0	3 4 0	3 0 0	—	—	—	3 10 0	3 0 0	3 4 0	1 11 0	1 14 0	2 0 0

CALCUTTA,
The 25th February, 1890.

PRICES PER MAUND								
JOWAR OR CHODUN. (Sorghum Vulgare.)			BAJRA OR CUMED. (Pennisetum typhodesum.)					
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.			
R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.	R.A.P.
10 7 1	11 0 2	4 0 2	4 5 3	6 7 3	10 7			
...			
...			
...			
...			
13 6 1	13 0 1	10 0	...	...	...
...			
...			
...			

OF 40 SEERS

MARUA OR RAGI (Eleusine Coracana.)			KANONI OR KANT ITALIAN MILLER (Setaria italica)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
...	3 12 02	6 02	6 02
...
...
...
...
1 70	1 70	...	1 12	02	02
...
...

in the undermentioned *Marts* of Bengal on the 15th February 1890.

GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (<i>Oicer Arictinum.</i>)			INDIAN-CORN OR MAISE. (<i>Zea Mays.</i>)			ARHAR OR THUR. CAIJAN PEA. (<i>Cajanus indicus.</i>)			FIREWOOD.			SALT.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
2 2 4	2 2 8	2 7 2	1 14 6	1 15 0	2 4 0	1 15 11	1 15 10	2 2 8	0 5 6	0 5 6	0 5 9	3 11 0	3 11 0	3 9 7	Calcutta.
2 4 0	2 11 0	2 7 0	...	...	...	...	...	...	...	...	...	3 12 0	4 0 0	3 12 0	Seraingunge.
3 0 0	3 0 0	3 0 0	...	...	...	2 12 0	2 12 0	2 8 0	0 4 0	0 4 0	0 5 0	4 2 0	4 4 0	4 0 0	Dacca.
3 0 0	3 2 0	3 0 0	...	...	...	3 2 0	3 4 0	3 2 0	0 8 0	0 8 0	0 10 0	3 12 0	3 12 0	3 12 0	Naraingunge.
3 0 0	3 0 0	3 8 0	...	...	...	...	...	...	0 6 0	0 6 0	0 8 0	4 4 0	4 0 0	4 0 0	Chittagong.
1 9 6	1 11 6	2 0 0	1 10 6	1 11 0	1 12 6	1 13 6	1 13 0	1 10 0	0 6 0	0 6 0	0 5 0	3 13 6	3 14 0	3 12 6	Patna.
2 13 0	2 12 0	3 0 0	...	...	...	...	...	...	0 4 6	0 4 6	0 4 6	3 14 0	3 14 0	4 4 0	Balassore.
...	...	...	...	...	...	...	...	...	...	...	...	3 6 0	3 6 0	3 6 0	Poorce.
2 12 0	2 8 0	2 0 0	...	...	...	2 12 0	2 12 0	3 0 0	0 8 0	0 8 0	0 8 0	3 12 0	3 12 0	3 12 0	Cuttack.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISION.	STATION OBSERVATIONS.																
	District.	Representative station.	Air pressure.			Wind.		Temperature.									
			Mean barometric height, 5 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Time.	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.	Variation from normal mean of week.	Mean, 5 A.M.
Orissa.	Pooree	Pooree	29.898	29.911	—	NW	17.8	86.2	19th Feb.	?	?	?	84.6	?	?	?	?
	Gopalpur	Gopalpur	29.887	29.900	—113	NW	20.1	84.8	19th	63.9	15th Feb.	?	82.8	71.2	77.0	+5.9	?
	Paisa Point	Paisa Point	29.891	29.913	—117	W	23.7	86.4	20th	61.0	19th	?	84.8	66.9	75.7	+1.0	?
	Cuttack	Cuttack	29.844	29.787	—100	Calm	33.7	86.5	18th.	62.8	21st Feb.	?	83.9	66.4	80.4	+3.4	?
South-West Bengal.	Balacore	Balacore	29.880	29.911	—120	North-easterly.	43.2	84.4	18th.	61.6	19th	?	80.8	63.6	77.9	+3.0	?
	South-West Midnapore	Saugor Island	29.868	29.918	—109	Variable	27.4	86.2	20th	63.4	18th	?	83.0	69.8	76.4	+3.6	?
	Midnapore	Midnapore	29.702	29.918	—121	Variable	45.5	85.5	18th	61.2	18th, 19th Feb.	?	82.0	63.6	77.8	+0.6	?
	24-Pergunnahs	Calcutta	29.880	29.911	—118	Calm	93	86.5	18th	60.5	19th	?	85.4	64.6	75.0	+3.9	?
South-East Bengal.	Howrah	Howrah	29.880	29.911	—118	Calm	93	86.5	18th	60.5	19th	?	85.4	64.6	75.0	+3.9	?
	Hooghly	Hooghly	29.880	29.911	—118	Calm	93	86.5	18th	60.5	19th	?	85.4	64.6	75.0	+3.9	?
	Burdwan	Burdwan	29.884	29.908	—124	Westerly	34.3	85.0	18th, 19th Feb.	57.9	16th	?	80.9	61.5	73.9	+3.3	?
	Bankura	Bankura	29.884	29.907	—114	Calm	50.0	82.7	18th	57.8	18th	?	80.9	61.7	75.8	+3.4	?
North Bengal.	Roorbhoom	Roorbhoom	29.877	29.903	—111	NW	43.4	83.6	18th	57.9	18th	?	80.4	60.9	73.6	+3.4	?
	West Burdwan	West Burdwan	29.877	29.903	—111	NW	43.4	83.6	18th	57.9	18th	?	80.4	60.9	73.6	+3.4	?
	Mooredabad	Berhampore	29.837	29.908	—124	NW	48.5	81.1	18th	55.7	18th	?	81.2	58.1	71.0	+4.0	?
	Nuddea	Krishnachur	29.803	29.933	—100	WSW	47.1	80.9	18th	51.5	18th	?	80.3	58.5	73.5	+3.0	?
East Bengal.	Jessore	Jessore	29.871	29.906	—118	Calm	49.2	80.7	18th	50.0	18th	?	80.3	60.7	75.0	+0.4	?
	Khoulna	Khoulna	29.871	29.906	—118	Calm	49.2	80.7	18th	50.0	18th	?	80.3	60.7	75.0	+0.4	?
	Chittagong	Chittagong	29.842	29.935	—109	Westerly	46.6	80.1	21st	58.0	18th, 19th Feb.	?	81.5	62.1	73.8	+2.0	?
	Chittagong Hill Tracts	Dumagiri	29.842	29.935	—109	Westerly	46.6	80.1	21st	58.0	18th, 19th Feb.	?	81.5	62.1	73.8	+2.0	?
North Bengal.	Backergunge	Barrisal	29.904	29.917	—103	Calm	49.7	80.8	18th Feb.	54.6	18th	?	84.2	63.6	73.9	+4.0	?
	Noakhally	Noakhally	29.889	29.933	—114	Variable	42.6	87.0	21st	60.8	18th	?	85.9	62.0	72.6	—	?
	Furzedpore	Furzedpore	29.873	29.915	—114	SW	44.7	85.6	18th & 21st Feb.	59.6	18th	?	84.7	61.8	73.2	+0.6	?
	Dacca	Dacca	29.876	29.900	—124	SW	48.9	89.1	18th	58.8	18th	?	86.6	63.5	74.5	+4.1	?
North Bengal.	Tipperah	Comilla	29.881	29.923	—109	N	64.3	86.9	21st	57.0	18th	?	84.9	62.6	73.6	+4.3	?
	Mymensingh	Mymensingh	29.847	29.908	—121	Easterly	61.2	84.0	21st	56.1	18th	?	82.8	59.9	71.3	+4.1	?
	Sogra	Sogra	29.812	29.870	—118	Calm	48.9	88.3	18th	53.1	18th	?	80.2	58.6	71.0	+4.0	?
	Pubna	Sersajunge	29.841	29.890	—125	W & W	24.7	87.4	18th	52.9	18th	?	86.0	59.1	71.1	+4.2	?
North Bengal.	Rajshahy	Rajshahy	29.880	29.909	—104	Variable	57.0	88.3	18th	54.3	18th	?	85.4	60.8	74.5	+3.7	?
	Maldah	Maldah	29.834	29.919	—109	NW	56.0	85.6	21st	50.2	18th	?	86.0	58.8	70.2	—	?
	Dinapore	Dinapore	29.764	29.901	—142	SW	59.6	87.1	18th	50.2	18th	?	85.2	58.9	68.6	+3.7	?
	Rangpoor	Rangpoor	29.778	29.900	—120	Calm	29.0	85.4	18th	49.8	18th	?	80.7	60.0	69.3	+0.0	?
North Bengal.	Jalpaiguri	Jalpaiguri	29.806	29.894	—101	N	65.7	82.9	18th	49.9	18th	?	79.4	63.3	69.9	+1.9	?
	Cooch Behar	Cooch Behar	29.806	29.894	—101	N	65.7	82.9	18th	49.9	18th	?	79.4	63.3	69.9	+1.9	?
	Darjeeling Hill Tracts	Darjeeling	29.800	—	—	WNW	147.0	84.6	18th, 20th Feb.	34.5	21st	?	59.2	30.9	45.0	+6.6	?
	Purneah	Purneah	29.765	29.895	—124	Calm	94.4	84.7	20th, 21st Feb.	40.0	18th	?	83.3	61.2	67.0	+2.0	?
North Bengal.	North Bhagulpore	North Bhagulpore	29.765	29.895	—124	Calm	94.4	84.7	20th, 21st Feb.	40.0	18th	?	83.3	61.2	67.0	+2.0	?
	Mozufferpore	Mozufferpore	29.732	29.908	—122	WSW	94.1	84.4	18th Feb.	?	?	?	83.2	?	?	?	?
	Darbhanga	Darbhanga	29.732	29.908	—122	WSW	94.1	84.4	18th Feb.	?	?	?	83.2	?	?	?	?
	Chemparan	Mothari	29.659	29.901	—109	Variable	103.0	84.2	21st	48.9	18th, 19th Feb.	?	81.8	59.8	66.3	+3.9	?
North Bengal.	Chupra	Chupra	29.659	29.901	—109	Variable	103.0	84.2	21st	48.9	18th, 19th Feb.	?	81.8	59.8	66.3	+3.9	?
	Shahabad	Shahabad	29.672	29.927	—114	WSW	113.0	84.4	17th	53.4	5, 18	?	85.4	64.5	70.0	+3.7	?
	Gya	Gya	29.634	29.930	—107	SW	107.7	80.7	21st	52.0	18th	?	85.9	64.9	70.0	+0.1	?
	Patna	Patna	29.716	29.900	—111	SW	99.0	81.2	17th	50.2	18th	?	87.0	60.0	73.0	+4.0	?
North Bengal.	South Bhagulpore	South Bhagulpore	29.720	29.905	—120	Calm	18.0	85.7	18th	53.5	18th	?	86.7	65.6	71.2	+0.3	?
	Monohir	Monohir	29.720	29.905	—120	Calm	18.0	85.7	18th	53.5	18th	?	86.7	65.6	71.2	+0.3	?
	South Pergunnah	South Pergunnah	29.734	29.915	—109	NW	68.0	80.8	18th	53.1	18th	?	87.5	67.1	72.3	—	?
	Hazaribagh	Hazaribagh	29.775	29.900	—109	W	107.4	88.0	18th	50.3	18th	?	86.0	60.3	71.6	+5.0	?
North Bengal.	Lohardugga	Lohardugga	29.745	29.924	—109	Calm	130.4	87.1	17th	50.4	18th & 19th Feb.	?	86.5	68.6	71.4	+4.0	?
	Manbhum	Manbhum	29.745	29.924	—109	Calm	130.4	87.1	17th	50.4	18th & 19th Feb.	?	86.5	68.6	71.4	+4.0	?
	Binabhum	Binabhum	29.745	29.924	—109	Calm	130.4	87.1	17th	50.4	18th & 19th Feb.	?	86.5	68.6	71.4	+4.0	?
	Chyannagar	Chyannagar	29.745	29.924	—109	Calm	130.4	87.1	17th	50.4	18th & 19th Feb.	?	86.5	68.6	71.4	+4.0	?

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the years 1871 to 1889. The humidity of the atmosphere is expressed at percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The mean of the rainfall is the average of the rainfall in that district determined from the returns sent in by the subdivisions; stations for the period in question during the same years in the district ending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

the week ending Friday, the 21st of February 1890.

DISTRICT OBSERVATIONS.															Representative station.	District.	METEOROLOGICAL DIVISION.
No.	Average cloud amount at 5 A.M. for week.	Rainfall of week at observing station.	OF WEEK.		RAINFALL.												
			Mean for district.	Normal mean.	Since 1st of month.			Since 15th May 1889.			Average number of rainy days.	Normal number of rainy days.					
					Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.							
1	1.0	NH	NH	0.31	NH	0.60	-0.60	76.94	66.32	+16.62	0.0	0.4	Pooree	Pooree	Orissa.		
2	2.1	NH	NH	0.30	NH	0.73	-0.73	66.79	62.71	+15.66	0.0	0.4	Cuttack	Cuttack			
3	3.4	NH	NH	0.30	NH	0.82	-0.82	40.96	54.13	-4.17	0.0	0.4	Balasore	Balasore			
4	0	NH	NH	0.18	NH	1.10	-1.10	54.57	63.47	-4.90	0.0	0.4	Maunur Island	South-West Midnapore	Orissa.		
5	0	NH	NH	0.21	NH	0.61	-0.61	40.29	51.38	-5.09	0.0	0.5	Midnapore	Midnapore			
6	0.6	NH	NH	0.30	NH	1.10	-1.10	54.10	66.76	+1.24	0.0	0.5	Calcutta	24-Pargunnahs			
7	1.4	NH	NH	0.22	NH	0.89	-0.89	41.89	47.60	-3.71	0.0	0.4	Burdwan	Burdwan	Orissa.		
8	0	NH	NH	0.21	NH	0.63	-0.63	55.93	52.91	+3.02	0.0	0.3	Bankura	Bankura			
9	0	NH	NH	0.25	NH	0.91	-0.91	52.40	52.53	-0.07	0.0	0.3	Ranagunge	Hooghly			
10	0	NH	NH	0.20	NH	0.74	-0.74	61.17	51.29	-0.12	0.0	0.3	Merhampore	West Burdwan	Orissa.		
11	0.1	NH	NH	0.30	NH	0.92	-0.92	61.01	60.00	+1.53	0.0	0.4	Krishnagur	Mooredabad			
12	1.7	NH	NH	0.27	NH	0.93	-0.93	54.75	54.14	+0.61	0.0	0.6	Jessore	Nuddea			
13	3.1	NH	NH	0.19	NH	0.60	-0.60	109.53	114.35	-14.03	0.0	0.4	Chittagong	Chittagong	Orissa.		
14	1.6	NH	NH	0.20	NH	0.74	-0.74	65.17	62.34	-17.17	0.0	0.4	Dumagiri	Chittagong Hill Tracts			
15	0	NH	NH	0.25	NH	0.90	-0.90	74.11	77.91	+0.30	0.0	0.4	Barrisal	Backergunge			
16	1.4	NH	NH	0.25	NH	0.80	-0.80	66.82	108.00	-17.15	0.0	0.4	Noakholly	Noakholly	Orissa.		
17	1.4	NH	NH	0.37	NH	0.98	-0.98	61.22	56.70	+5.52	0.0	0.5	Farrakpore	Farrakpore			
18	2.4	NH	NH	0.34	NH	1.01	-1.01	76.19	60.01	+15.35	0.0	0.5	Dacca	Dacca			
19	1.7	NH	NH	0.20	NH	0.83	-0.83	49.75	64.14	-13.67	0.0	0.5	Comilla	Tipperah	Orissa.		
20	0	NH	NH	0.20	NH	0.77	-0.77	65.62	60.00	+7.62	0.0	0.5	Mymensingh	Mymensingh			
21	0	NH	NH	0.30	NH	0.98	-0.98	55.37	54.33	+1.04	0.0	0.5	Bogra	Bogra			
22	0.1	NH	NH	0.25	NH	0.69	-0.69	54.35	54.57	-0.22	0.0	0.4	Soragunge	Patna	Orissa.		
23	0	NH	NH	0.21	NH	0.58	-0.58	59.76	54.80	-15.04	0.0	0.4	Rampore Beaulah	Rajahmundry			
24	0.1	NH	NH	0.20	NH	0.47	-0.47	57.69	57.97	-0.28	0.0	0.4	Maldah	Maldah			
25	0	NH	NH	0.15	NH	0.61	-0.61	65.87	74.23	+11.63	0.0	0.4	Dinapore	Dinapore	Orissa.		
26	0	NH	NH	0.15	NH	0.37	-0.37	117.73	111.62	+6.11	0.0	0.5	Rungpore	Rungpore			
27	4.6	NH	NH	0.23	NH	0.54	-0.54	133.49	121.91	+11.55	0.0	0.5	Jalpaiguri	Jalpaiguri			
28	0.1	NH	NH	0.11	NH	0.44	-0.44	75.00	59.16	+15.84	0.0	0.4	Darjeeling	Darjeeling Hill Tract.	Orissa.		
29	0.3	NH	NH	0.07	NH	0.36	-0.36	46.82	48.90	+6.03	0.0	0.3	Purneah	Purneah			
30	0.3	NH	NH	0.09	NH	0.46	-0.46	46.82	48.90	+6.03	0.0	0.3	North Bhagalpore	North Bhagalpore			
31	1.7	NH	NH	0.09	NH	0.37	-0.37	63.96	47.16	+16.80	0.0	0.3	Mozufferpore	Mozufferpore	Orissa.		
32	0	NH	NH	0.16	NH	0.60	-0.60	40.13	43.36	-3.23	0.0	0.3	Durbhanga	Durbhanga			
33	1.0	NH	NH	0.10	NH	0.37	-0.37	40.07	40.45	-0.38	0.0	0.2	Motihari	Ohamparua			
34	1.3	NH	NH	0.11	NH	0.39	-0.39	57.97	42.01	+4.91	0.0	0.3	Chupra	Saran	Orissa.		
35	1.0	NH	NH	0.10	NH	0.44	-0.44	43.49	41.70	+1.73	0.0	0.3	Shahabad	Shahabad			
36	0.3	NH	NH	0.19	NH	0.40	-0.40	62.43	63.66	-1.23	0.0	0.4	Gya	Gya			
37	0	NH	NH	0.11	NH	0.44	-0.44	64.16	61.23	+2.93	0.0	0.3	Bankipore	Patna	Orissa.		
38	1.1	NH	NH	0.16	NH	0.28	-0.28	43.93	40.99	+2.94	0.0	0.3	South Bhagalpore	South Bhagalpore			
39	0.3	NH	NH	0.17	NH	0.61	-0.61	44.34	40.70	+3.64	0.0	0.4	Monohyr	Monohyr			
40	0	NH	NH	0.16	NH	0.60	-0.60	39.30	47.78	-8.48	0.0	0.4	Doonke	Sonthal Pargunnahs	Orissa.		
41	0	NH	NH	0.18	NH	0.60	-0.60	44.70	47.78	-3.08	0.0	0.4	Hasaribagh	Hasaribagh			
42	0	NH	NH	0.18	NH	0.60	-0.60	44.70	47.78	-3.08	0.0	0.4	Manchi	Lohardugga			
43	0	NH	NH	0.18	NH	0.60	-0.60	44.70	47.78	-3.08	0.0	0.4	Chyabasa	Manthoom	Orissa.		
44	0	NH	NH	0.18	NH	0.60	-0.60	44.70	47.78	-3.08	0.0	0.4	Chyabasa	Singhoom			

10 years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.
 10 years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.
 10 years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890

Meteorological division.	District.	Station.	RAINFALL.							TOTAL		Total rain-fall since 1st of month.	Average total rain-fall from 1st of month.	Total rain-fall since 1st of May 1889.	Average rain-fall from 1st of May.
			Saturday, 15th February.	Sunday, 16th February.	Monday, 17th February.	Tuesday, 18th February.	Wednesday, 19th February.	Thursday, 20th February.	Friday, 21st February.	Number of rainy days.	of rainfall inch.				
ORISSA	Purba	Purba	...	...	...	...	...	...	...	Nil	Nil	Nil	0.81	80.71	...
		Khumlah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.52	70.57	...
		Bampur	...	...	...	...	...	...	...	Nil	Nil	Nil	0.73	85.50	...
		Paik Pait	...	...	...	...	...	...	...	Nil	Nil	Nil	0.71	77.00	...
		Gop	...	...	...	...	...	...	...	Nil	Nil	Nil	?	?	...
	Onda	Pipli	...	...	...	...	...	...	...	Nil	Nil	Nil	?	?	...
		Jagatsinghpore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.56	74.40	...
		Banki	...	...	...	...	...	...	...	Nil	Nil	Nil	0.47	82.43	...
		Cuttack	...	...	...	...	...	...	...	Nil	Nil	Nil	0.70	70.18	...
		Kendrapara	...	...	...	...	...	...	...	Nil	Nil	Nil	0.71	75.34	...
	Balasore	Jajpore	...	...	...	...	...	...	...	Nil	Nil	Nil	1.00	87.04	...
		Dharmasala	...	...	...	...	...	...	...	Nil	Nil	Nil	?	80.26	...
		Salapora	...	...	...	...	...	...	...	Nil	Nil	Nil	?	72.47	...
		Chandbali	...	...	...	...	...	...	...	Nil	Nil	Nil	0.69	88.04	...
		Rhuddruch	...	...	...	...	...	...	...	Nil	Nil	Nil	0.62	87.00	...
SOUTH-WEST BENGAL.	Midnapore	Sorah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.56	46.05	...
		Balasore	...	...	...	...	...	...	...	Nil	Nil	Nil	1.18	46.01	...
		Jalgaon	...	...	...	...	...	...	...	Nil	Nil	Nil	0.64	30.56	...
		Haripodah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.66	84.70	...
		Contai	...	...	...	...	...	...	...	Nil	Nil	Nil	1.09	86.18	...
	24-Pargunnah	Saugor Island	...	...	...	...	...	...	...	Nil	Nil	Nil	1.3	86.74	...
		Tumlook	...	...	...	...	...	...	...	Nil	Nil	Nil	1.00	40.00	...
		Midnapore (Ghatia)	...	...	...	...	...	...	...	Nil	Nil	Nil	0.78	44.26	...
		Kakrahata	...	...	...	...	...	...	...	Nil	Nil	Nil	0.62	43.30	...
		Garbatia	...	...	...	...	...	...	...	Nil	Nil	Nil	?	89.84	...
	Howrah	Diamond Harbour	...	...	...	...	...	...	...	Nil	Nil	Nil	1.25	63.70	...
		Canning Town	...	...	...	...	...	...	...	Nil	Nil	Nil	?	87.83	...
		Alipore Jail	...	...	...	...	...	...	...	Nil	Nil	Nil	1.31	81.87	...
		Barrackpore	...	...	...	...	...	...	...	Nil	Nil	Nil	1.21	88.13	...
		Dum-Dum	...	...	...	...	...	...	...	Nil	Nil	Nil	0.95	83.48	...
	Hooghly	Barrackpore	...	...	...	...	...	...	...	Nil	Nil	Nil	1.18	88.71	...
		Busechhat	...	...	...	...	...	...	...	Nil	Nil	Nil	0.91	82.42	...
		Howrah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.95	89.44	...
		Mohoraka (Colcheryah)	...	...	...	...	...	...	...	Nil	Nil	Nil	1.04	85.04	...
		Serampore	...	...	...	...	...	...	...	Nil	Nil	Nil	1.16	85.01	...
	Sardwan	Hooghly	...	...	...	...	...	...	...	Nil	Nil	Nil	1.13	87.83	...
		Johannabad	...	...	...	...	...	...	...	Nil	Nil	Nil	1.18	41.61	...
		Culna	...	...	...	...	...	...	...	Nil	Nil	Nil	0.83	41.33	...
		Sardwan	...	...	...	...	...	...	...	Nil	Nil	Nil	0.77	47.25	...
		Cutwa	...	...	...	...	...	...	...	Nil	Nil	Nil	1.06	43.11	...
BANKURA	Bankura	Bansengunge	...	...	...	...	...	...	...	Nil	Nil	Nil	1.00	85.00	...
		Manpur	...	...	...	...	...	...	...	Nil	Nil	Nil	?	83.80	...
		Bankura	...	...	...	...	...	...	...	Nil	Nil	Nil	0.73	86.86	...
		Hushupore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.76	87.60	...
		Mahara	...	...	...	...	...	...	...	Nil	Nil	Nil	0.46	85.91	...
	Khatra	Khatra	...	...	...	...	...	...	...	Nil	Nil	Nil	0.58	85.91	...
		Indra	...	...	...	...	...	...	...	Nil	Nil	Nil	?	43.14	...
		Kutaiapora	...	...	...	...	...	...	...	Nil	Nil	Nil	?	46.40	...
		Anda	...	...	...	...	...	...	...	Nil	Nil	Nil	?	41.44	...
		Gangajalhati	...	...	...	...	...	...	...	Nil	Nil	Nil	?	86.17	...
	Bardhaman	Baspara	...	...	...	...	...	...	...	Nil	Nil	Nil	?	85.35	...
		Sonamukhi	...	...	...	...	...	...	...	Nil	Nil	Nil	?	85.44	...
		Bh. Soory	...	...	...	...	...	...	...	Nil	Nil	Nil	0.66	86.06	...
		Hatampur	...	...	...	...	...	...	...	Nil	Nil	Nil	0.91	47.07	...
		Empore Hari	...	...	...	...	...	...	...	Nil	Nil	Nil	0.76	47.78	...
NADIA	Nadia	Bulpara	...	...	...	...	...	...	...	Nil	Nil	Nil	?	85.04	...
		Murari	...	...	...	...	...	...	...	Nil	Nil	Nil	?	82.12	...
		Ranaghat	...	...	...	...	...	...	...	Nil	Nil	Nil	0.83	80.10	...
		Kushnagar	...	...	...	...	...	...	...	Nil	Nil	Nil	0.80	42.05	...
		Choudsanga	...	...	...	...	...	...	...	Nil	Nil	Nil	1.01	49.06	...
	Kachua	Meherpore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.94	81.15	...
		Kooshtea	...	...	...	...	...	...	...	Nil	Nil	Nil	0.98	86.00	...
		Satkhira	...	...	...	...	...	...	...	Nil	Nil	Nil	0.93	84.64	...
		Bagirhat	...	...	...	...	...	...	...	Nil	Nil	Nil	1.14	85.48	...
		Khoolna	...	...	...	...	...	...	...	Nil	Nil	Nil	0.60	80.83	...
	Jessore	Nakipur	...	...	...	...	...	...	...	Nil	Nil	Nil	?	?	...
		Nakipur	...	...	...	...	...	...	...	Nil	Nil	Nil	?	?	...
		Narail	...	...	...	...	...	...	...	Nil	Nil	Nil	0.90	87.01	...
		Jessore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.92	83.00	...
		Jhenidah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.96	80.74	...
MOORSHEDABAD	Moorshedabad	Magoorah	...	...	...	...	...	...	...	Nil	Nil	Nil	0.80	86.00	...
		Bongong	...	...	...	...	...	...	...	Nil	Nil	Nil	0.91	47.44	...
		Kandi	...	...	...	...	...	...	...	Nil	Nil	Nil	0.88	85.88	...
		Berhampore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.89	46.23	...
		Lalbagh	...	...	...	...	...	...	...	Nil	Nil	Nil	0.65	47.13	...
	Jalgaon	Asimgunge	...	...	...	...	...	...	...	Nil	Nil	Nil	0.73	80.73	...
		Jungipore	...	...	...	...	...	...	...	Nil	Nil	Nil	0.66	85.01	...
		Jalgaon	...	...	...	...	...	...	...	Nil	Nil	Nil	0.63	89.03	...
		Jaguna	...	...	...	...	...	...	...	Nil	Nil	Nil	?	43.80	...
		Akhriganj	...	...	...	...	...	...	...	Nil	Nil	Nil	?	43.00	...
EAST BENGAL	Chittagong	Potkhari	...	...	...	...	...	...	...	Nil	Nil	Nil	?	?	...
		Cor's Bazar	...	...	...	...	...	...	...	Nil	Nil	Nil	0.40	133.50	...
		Chittagong	...	...	...	...	...	...	...	Nil	Nil	Nil	0.73	77.00	...
		Kutubdia	...	...	...	...	...	...	...	Nil	Nil	Nil	?	113.00	...
		Bethanya	...	...	...	...	...	...	...	Nil	Nil	Nil	?	63.00	...
	Chittagong Hill Tracts.	Kangamati	...	...	...	...	...	...	...	Nil	Nil	Nil	0.69	81.13	...
		Kuma	...	...	...	...	...	...	...	Nil	Nil	Nil	0.55	67.80	...
		Patanthalley	...	...	...	...	...	...	...	Nil	Nil	Nil	0.95	87.00	...
		Purnapora	...	...	...	...	...	...	...	Nil	Nil	Nil	1.13	72.64	...
		Burial	...	...	...	...	...	...	...	Nil	Nil	Nil	0.83	78.81	...
	Moulvibazar	Mohla	...	...	...	...	...	...	...	Nil	Nil	Nil	0.64	80.00	...

statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890—contd.

Meteorological Division.	District.	Station.	RAINFALL.							TOTAL.		Total rain-fall since 1st of month.	Average total rain-fall since 1st of month.	Total rain-fall since 15th May 1899.	Average rainfall from 15th May to date.
			Saturday, 10th February.	Sunday, 11th February.	Monday, 12th February.	Tuesday, 13th February.	Wednesday, 14th February.	Thursday, 15th February.	Friday, 16th February.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL.	Northchilly ...	Gourmadda	NH	NH	NH	?	61.21	?	
		Banghal	NH	NH	NH	?	93.18	?	
		Vonahelli	NH	NH	NH	0.88	108.58	108.48	
		Fenny	NH	NH	NH	1.00	70.03	107.61	
	Furzedpore ...	Harishpore	NH	NH	NH	?	81.32	?	
		Bamganj	NH	NH	NH	?	80.75	?	
		Madai pore	NH	NH	NH	0.77	62.98	64.25	
		Furzedpore	NH	NH	NH	1.00	65.00	67.33	
	Dacca ...	Joaniride	NH	NH	NH	1.13	84.05	84.07	
		Munshingunge	NH	NH	NH	1.08	77.51	71.16	
		Dacca	NH	NH	NH	0.90	70.46	60.28	
		Narainchunge	NH	NH	NH	1.08	81.14	60.83	
	Hill Tipperah ...	Manickchunge	NH	NH	NH	1.00	69.67	81.00	
		Joydebporo	NH	NH	NH	?	65.55	?	
		Agartala	NH	NH	NH	0.94	44.38	62.49	
		Comilla	NH	NH	NH	0.70	62.77	70.00	
		Chandpore	NH	NH	NH	0.73	65.97	76.81	
		Brahmunberia	NH	NH	NH	1.08	53.12	62.75	
		Ranchandrapore	NH	NH	NH	?	60.53	?	
		Narainnagar	NH	NH	NH	?	32.39	?	
		Bandkendi	NH	NH	NH	?	55.73	?	
		Kocha	NH	NH	NH	?	62.44	?	
		Lakshor	NH	NH	NH	?	64.16	?	
		Mymensingh ...	Kishoreganj	NH	NH	NH	0.80	70.80	70.76
Atia (Tangai) ...	.....		.....	.....	.....	.....	.....	NH	NH	NH	1.02	68.99	80.41
Mymensingh ...	.....		.....	.....	.....	.....	.....	NH	NH	NH	0.87	97.03	74.83
Jamipore ...	.....		.....	.....	.....	.....	.....	NH	NH	NH	1.03	60.01	65.19
	Narail ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.45	120.47	23.19
	Sukarnahalli ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	57.43	?
	Durgapore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	150.30	?
	Sherpore Town ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	69.17	?
	Dewanganj ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	67.08	?
	Pabna ...	Pabna	NH	NH	NH	0.91	60.50	84.67	
		Boragunja	NH	NH	NH	1.03	60.51	83.89	
		Bogra ...	Chorepore	NH	NH	NH	0.69	62.07	84.31
Nowkhilla	NH	NH	NH	0.79	62.44	84.90	
Hogra ...	.....		.....	.....	.....	.....	.....	NH	NH	NH	0.83	71.33	61.42
Panchabhi ...	.....		.....	.....	.....	.....	.....	NH	NH	NH	0.62	65.98	86.34
Rajshahye ...	Beaulah ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.77	64.34	83.08
	Nattore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.89	58.81	85.81
	Narayan ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.40	67.65	81.08
	Lalpara ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	36.72	?
	Manda ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	46.87	?
	Malda ...	Malda	NH	NH	NH	0.51	50.23	82.23	
		Chanchel	NH	NH	NH	0.64	28.06	81.35	
		Gajal	NH	NH	NH	?	40.79	?	
Silganj ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	51.77	?
Dinagopore ...	Mahadal pore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.84	53.63	87.03
	Chitramon ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.47	51.82	83.05
	Kaistunge ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.48	52.37	86.31
	Dinagopore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.10	65.23	85.91
	Hakoorshat ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.25	61.29	81.77
	Thakoorgaon ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	87.81	?
	Rangpore ...	Bhowanigunge	NH	NH	NH	0.51	68.39	82.17	
		(Gyabanda)	NH	NH	NH	?	?	?	
Rangpore ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	0.33	74.96	74.88
Kurigram ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	0.31	91.65	73.65
	Bagdoga ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.64	88.40	83.62
	(Nilphamari) ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Ulipora ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	79.10	?
	Jalpigore ...	Jalpigore	NH	NH	NH	0.27	123.45	117.37	
Alipore Door ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	110.58	?
Paliacotta ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	128.23	?
Debigany ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	100.94	?
	Rhapigore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	130.22	?
	(Nayrabatta). ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Cooch Behar ...	Dinhaba	NH	NH	NH	0.40	98.53	80.79	
		Cooch Behar	NH	NH	NH	0.28	175.30	114.66	
Mitchingore ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	0.48	122.40	100.24
Matachhanga ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	0.42	118.03	118.06
Darjeeling Hill.	Buza ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.08	102.37	103.13
	Silliguri ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.20	121.02	115.60
	Darjeeling ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.11	123.28	104.39
	Kalimpang ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	89.15	84.40
	Kurseong ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	170.23	?
	Purneah ...	Kisnoogunge	NH	NH	NH	0.44	103.07	70.87	
		Arrazoh	NH	NH	NH	0.32	70.75	61.20	
		Purneah	NH	NH	NH	0.53	63.47	62.13	
Gondwara ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Halatrapore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Nattori ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Kaisaganj ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Madadapore ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.61	60.85	80.08
North Bhagulpore.	Asapool ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.80	67.26	66.67
	Pratibganj ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	66.10	?
	Durbhanga ...	Tajpore	NH	NH	NH	0.38	42.67	43.61	
		Durbhanga	NH	NH	NH	0.41	50.24	40.27	
Madhubani ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	0.30	63.56	40.41
Buhara ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	69.00	?
	Buhara ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	80.74	?
	Mousherpore	Ritamathi	NH	NH	NH	0.27	66.45	67.30	
		Mousherpore	NH	NH	NH	0.30	64.47	64.17	
		Haipore	NH	NH	NH	0.43	62.57	62.47	
Pora ...		.....	.....	.....	.....	.....	.....	NH	NH	NH	?	87.60	?
	Mahua ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	61.02	?
	Buhar ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	?
	Pupri ...	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	66.14	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 21st of February 1890—concl

Meteorological Division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1889.	Average rainfall from 15th May 1889.
			Saturday, 16th February.	Sunday, 16th February.	Monday, 17th February.	Tuesday, 18th February.	Wednesday, 19th February.	Thursday, 20th February.	Friday, 21st February.	Number of rainy days.	Rainfall in week.				
NORTH BENGAL—continued	Chunpuran	Mothari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.35	75.23	63.7
		Restah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.39	82.87	68.7
		Baucha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	70.24	60.7
SOUTH BENGAL	Shahabad	Burhanpur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	81.70	67.7
		Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	35.48	64.7
		Chuprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.39	46.30	51.7
SOUTH BENGAL	Gya	Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	40.74	47.7
		Dahra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	41.08	47.7
		Rahabnath	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	34.18	61.7
SOUTH BENGAL	Patna	Sacwan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.43	29.41	61.7
		Arrah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.34	43.00	67.7
		Mohamud	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7
SOUTH BENGAL	Gya	Aurangabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	35.48	63.7
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	39.83	63.7
		Nowadsh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.45	20.59	67.7
SOUTH BENGAL	Patna	Jehanabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.37	23.40	67.7
		Arwal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34.34	67.7
		Bandhupur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	24.60	67.7
SOUTH BENGAL	Patna	Sherrghati	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	20.20	67.7
		Barh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17.02	67.7
		Pakri Barman	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31.90	67.7
SOUTH BENGAL	Patna	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	31.40	67.7
		Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	45.53	67.7
		Meher	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.49	41.08	67.7
SOUTH BENGAL	Patna	Barh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.36	35.81	67.7
		Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61.24	67.7
		Hilsa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	35.21	67.7
SOUTH BENGAL	Monghyr	Bemohar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.32	47.82	67.7
		Monghyr	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.49	41.07	67.7
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	39.49	67.7
SOUTH BENGAL	South Bhagalpore	Gopri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30.19	67.7
		Shikpara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43.53	67.7
		Bhagalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.41	43.00	67.7
SOUTH BENGAL	South Bhagalpore	Raika	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.45	28.34	67.7
		Raika	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44.97	67.7
		Bongson	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7
SOUTH BENGAL	South Patna	Rajmahal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	59.80	67.7
		Gudua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	49.04	67.7
		Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.35	13.56	67.7
SOUTH BENGAL	South Patna	Nya Boma	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	50.77	67.7
		Deonar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	40.40	67.7
		Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.38	45.21	67.7
SOUTH BENGAL	South Patna	Mahagan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60.61	67.7
		Naminal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33.87	67.7
SOUTH BENGAL	South Patna	Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	33.80	67.7
		Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.34	49.10	67.7
		Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.42	26.54	67.7
SOUTH BENGAL	South Patna	Mahud Hill	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.47	43.00	67.7
		Shomra Hill	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	31.36	67.7
		Narhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41.04	67.7
SOUTH BENGAL	South Patna	Chitra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39.30	67.7
		Karajika	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7
		Kampha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7
SOUTH BENGAL	South Patna	Leharanga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.37	45.24	67.7
		Kaucha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.37	55.61	67.7
		Patna	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.41	24.16	67.7
SOUTH BENGAL	South Patna	Narhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33.80	67.7
		Bahmat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41.40	67.7
		Huamachad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28.71	67.7
SOUTH BENGAL	South Patna	Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	44.75	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40.84	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50.70	67.7
SOUTH BENGAL	South Patna	Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50.80	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	48.62	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	33.19	67.7
SOUTH BENGAL	South Patna	Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44.91	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44.32	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51.42	67.7
SOUTH BENGAL	South Patna	Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	55.00	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7
		Chavindam	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	67.7

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 25th February 1890.

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 21st
FEBRUARY 1890.**

In the meteorology of the previous week it was noticed that there had been a slow but steady disappearance of the north-east monsoon or cold-weather conditions with the gradual establishment of the conditions which obtain just previous to the setting in of the hot weather. Pressure at the close of that week was decidedly low, while temperature was rather largely in excess of the normal, and the northerly component in the wind directions was growing steadily more feeble. The general result of the changes which have taken place this week has been to practically almost entirely efface the conditions which obtain in the cold season and to establish those of the hot weather. Winds have been generally light and variable during the week, with a steadily increasing southerly component in them, temperature on the whole has risen steadily, and pressure has continued very low for the season. The only period during the week when there was any break in the steady establishment of the hot season conditions was on the 17th and 18th, when a barometric depression passed through Bengal. This depression had first been observed near Jacobabad on the morning of the 15th and it moved in an easterly direction, but though the barometric depression at its centre was decidedly large, yet it failed to give any rain to Bengal in its passage through it. When the depression commenced to advance over Bengal, temperature was as usual exceptionally high, but in its rear temperature fell very distinctly, though the effect was only very temporary; and again at the close of the week temperature generally averaged from 3° to 6° above the normal. With the absence of any disturbance, therefore, which was sufficiently intense to give local storms, again the whole province has been quite rainless for the period under review.

Pressure—Has been in defect of the normal almost throughout the week, and the average defect in different districts has varied from about nine to twelve-hundredths of an inch.

Temperature.—The mean temperature of the whole province for the week has been between 4° and 5° above the normal, the excess being largest in South Behar and Chutia Nagpur, where it has exceeded five degrees. The rapid increase in temperature during the week is clearly seen in the figures representing the average mean temperature in the various districts, and thus in Orissa the rise during this period has equalled 4·2°, in South-West Bengal it has been 5·9°, in East Bengal 6·0°, in North Bengal 4·1°, in North Behar 3·6°, in South Behar 3·9°, and in Chutia Nagpur 4·0°. The actual temperatures during the week, the range from day to night, and their variation from their normal values are best seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province are given, together with their normal values. It will be seen that both day and night temperatures have been almost equally in excess, and that at some stations the average temperatures have even been as much as about 6° and 7° above the normal:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 21st February 1890.

	Normal mean maximum temperature for the week ending 21st February.	Actual mean maximum temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 21st February.	Actual mean minimum temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 21st February.	Actual mean daily temperature for the week ending 21st February 1890.	Variation of actual mean from the normal.
Ontoach	80·3	83·9	+3·6	65·5	66·9	+1·4	72·9	80·4	+7·5
Calcutta	82·0	85·4	+3·4	66·3	67·6	+1·3	74·2	75·0	+0·8
Dacca	82·3	86·3	+4·0	67·8	67·8	0·0	75·1	74·3	−0·8
Burdwan	83·0	86·0	+3·0	67·6	67·6	0·0	75·3	75·3	0·0
Patna	78·2	84·3	+6·1	62·5	65·0	+2·5	70·4	75·9	+5·5
Gya	81·9	87·0	+5·1	66·2	69·0	+2·8	74·1	78·5	+4·4
Purnea	79·5	83·3	+3·8	61·4	61·7	+0·3	70·5	67·5	−3·0
Muzarbhagh	77·7	83·6	+5·9	64·3	69·3	+5·0	71·0	71·4	+0·4
Darjeeling	67·4	63·2	−4·2	34·3	39·9	+5·6	50·8	46·6	−4·2

Rainfall—Has been entirely absent throughout the whole province for the week.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 21st of February 1890:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE						RAINFALL.									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.			Rainy days.			Since 1st of month.		Since 1st of May 1901.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Orissa	95°9'	61°0'	88°0'	67°5'	77°8'	+2°8'	Nil	0°27	-0°27	0°0	0°4	-0°4	Nil	0°75	68°10	54°31
South-West Bengal ...	93°5'	61°3'	88°1'	68°5'	75°3'	+4°8'	Nil	0°20	-0°20	0°0	0°4	-0°4	Nil	0°91	62°51	52°25
East Bengal	89°1'	64°0'	84°4'	62°2'	73°3'	+4°4'	Nil	0°24	-0°24	0°0	0°5	-0°5	Nil	0°33	78°36	75°16
North Bengal	88°0'	60°8'	84°2'	61°2'	69°7'	+4°4'	Nil	0°22	-0°22	0°0	0°4	-0°4	Nil	0°55	78°34	70°06
North Bihar*	84°7'	48°9'	82°8'	61°2'	68°0'	+3°1'	Nil	0°10	-0°10	0°0	0°3	-0°3	Nil	0°41	57°50	49°30
South Bihar*	91°2'	62°5'	86°9'	66°3'	71°4'	+5°1'	Nil	0°12	-0°12	0°0	0°3	-0°3	Nil	0°41	64°16	64°27
Chutia Nagpur	88°0'	55°3'	83°0'	58°9'	71°4'	+5°2'	Nil	0°17	-0°17	0°0	0°4	-0°4	Nil	0°64	68°08	

* Pooree, Chupra, Dehree and Chyebasse not included.

METEOROLOGICAL OFFICE, BENGAL;

A. PEDLER,

The 25th February 1890.

Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 16th to 22nd February 1890.

MONTH.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	TEMPERATURE.						HYGROMETRY.			Rainfall per 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
Feb. 1890 ...	16th ...	29.849	75.7	82.9	14.5	68.4	77.6	72.8	.743	70.3	79	Nil
" " ...	17th ...	29.806	79.4	89.0	19.2	69.8	79.6	73.6	.709	68.9	70	"
" " ...	18th ...	29.859	78.2	86.4	20.4	66.0	78.6	73.6	.689	62.0	40	"
" " ...	19th ...	30.018	73.5	80.3	25.6	60.7	79.6	63.8	.680	61.4	37	"
" " ...	20th ...	29.999	75.6	87.8	22.4	63.4	79.6	68.6	.661	61.7	55	"
" " ...	21st ...	30.002	77.5	89.0	22.1	65.9	80.4	68.6	.642	61.2	52	"
" " ...	22nd ...	29.982	77.2	89.6	24.9	64.7	79.6	67.6	.516	59.8	51	"

The mean 10 A.M. pressure of the seven days Inches. 29.945

The mean temperature of the seven days 76.4

The extreme variation of temperature 28.9

The maximum temperature 89.6

The mean 10 A.M. relative humidity of the seven days % 56

The total fall of rain from 16th to 22nd February 1890 Inches. Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

O. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA;

The 24th February 1890.

Results of the Meteorological Observations taken at the Alipore Observatory from 16th to 22nd February 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
Feb.	16th	137.5	7.9	29.756	75.4	86.4	11.0	67.7	71.0	0.702	68.7	81	SSW and S by W ...	137	Nil	Chiefly cloudy.
"	17th	139.5	8.9	735	77.1	88.5	11.4	69.5	71.1	681	67.8	74	SW and SSW	161	"	Clear.
"	18th	138.5	7.8	872	74.6	85.5	10.9	66.0	66.9	566	62.4	67	N, variable and calm	63	"	Chiefly clear.
"	19th	140.2	8.1	917	72.4	85.2	12.8	59.3	62.4	432	54.9	56	NNW and variable...	44	"	Clear.
"	20th	139.0	8.1	910	74.2	86.5	12.3	61.4	66.7	557	62.0	67	S and WSW	60	"	Clear.
"	21st	143.4	8.9	689	75.8	88.5	12.7	63.9	66.3	519	60.0	62	SW by W and variable.	81	"	Clear.
"	22nd	142.4	8.6	901	75.1	88.6	13.5	63.1	66.4	533	60.8	61	SW by S and variable.	46	"	Clear.

The mean pressure of the seven days ... 29.854
The average pressure of the corresponding period for 24 years, S.-G.'s Office ... 29.948

The total number of hours of bright sunshine ... 57.8
The maximum possible number of hours of sunshine ... 80.8

The mean temperature of the seven days ... 74.9
The average temperature of the corresponding period for 24 years, S.-G.'s Office ... 74.0
The extreme variation of temperature ... 29.3
The maximum temperature ... 88.6

The highest velocity of the wind in one hour ... 13

The highest pressure of wind on one square foot ... Not measurable.

The mean relative humidity ... 67
The average relative humidity of the corresponding period for 24 years, S.-G.'s Office ... 66

The total fall of rain from 16th to 22nd February 1890 ... Nil
The average fall of the corresponding period for 24 years, S.-G.'s Office ... 0.25
The total fall from 1st January to 22nd February 1890 ... 0.77
The average fall of the corresponding period for 24 years, S.-G.'s Office ... 1.29

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beakley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

a dew, = fog.

O. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;
Calcutta, the 24th February 1890.

MEMORANDUM.

During the week ending 8th February 1890, the returns of the vital statistics of the principal Municipalities in Bengal presented the following results:—

1. The birth-rate amounted to 23·3 per 1,000 of population, against 21·7 per 1,000 in the preceding week ending 1st February, showing an increase in the registration, and the death-rate to 23·9 per 1,000, against very nearly the same ratio, viz., 23·7 per 1,000.

2. The following Municipalities returned the highest proportions of births and deaths —

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Darjiling	...	51·9	Poori	...	128·0
Comillah	...	50·1	Darjiling	...	50·3
Narainganj	...	37·3	Jessore	...	49·0
Durbhanga	...	36·2	Serampore	...	47·1
Monghyr	...	35·3	Hughli and Chinsurah	...	46·9
Bhagulpore	...	31·7	Purneah	...	38·1
Gya	...	31·4	Narainganj	...	37·3
			Burdwan	...	35·1
			Gya	...	34·8
			Midnapore	...	31·0

3. The mortality from the several death-causes was as follows in comparison with that in the preceding week:—

			Ratio per mille during the weeks ending—	
			8th February 1890.	1st February 1890.
Cholera	...	...	2·3	2·2
Small-pox	...	...	1·1	·6
Fever	...	...	10·3	9·3
Bowel-complaints	...	...	3·3	2·9
Injury	...	...	·6	·4
Other causes	...	...	6·4	7·3

The only noticeable point indicated by the above figures is that there was a noticeable increase of mortality from fever.

4. The following Municipalities suffered in a more marked degree than the others from the diseases mentioned in the foregoing table:—

Cholera.	Small-pox.	Fever.	Bowel-complaints.	Other causes.
Ratio per mille.	Ratio per mille.	Ratio per mille.	Ratio per mille.	Ratio per mille.
Poori ... 33·6	Poori .. 39·8	Darjiling ... 44·5	Serampore ... 17·7	Poori ... 25·2
Hughli & Chinsurah ... 8·2		Purneah ... 31·2	Burdwan ... 10·7	Midnapore ... 18·6
Serampore ... 7·8		Gya ... 31·8	Poori ... 10·6	Bali ... 17·5
Howrah ... 6·7		Hughli and Chinsurah ... 31·2		Narainganj ... 16·4
				Gya ... 11·6

Small-pox unfortunately continued to rage in Poori town with much severity.

5. The mortality referable to Sex, Class and Age stood as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males	...	Christians	...	Under 1 year	...
Females	...	Hindus	...	1 and under 5 years	...
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	124	Mahomedans	...	5 " 10 "	...
				10 " 15 "	...
				15 " 20 "	...
				20 " 30 "	...
				30 " 40 "	...
				40 " 50 "	...
				50 " 60 "	...
				60 years and upwards	...

W. H. GREGG, Dip. Publ. Health, Camb.,
Sanitary Commissioner for Bengal.

The 24th February 1890.

[illegible]

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 22nd February 1890,
as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 22ND FEBRUARY 1890.			WEEK ENDING SATURDAY, THE 23RD FEBRUARY 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy ...	1,704	2,84,282	4,616	1,085	2,80,857	5,222
Jute ...	135	98,125	1,005	135	87,675	1,767
Firewood ...	115	59,210	1,130	127	76,810	1,269
Other articles ...	1,024	2,74,750	4,082	1,027	2,45,893	3,818
Total ...	3,068	7,16,367	11,283	2,354	6,93,737	12,001

Eastern Bengal State Railway.

*Abstract of principal commodities carried over the Eastern Bengal State Railway during the month of
November 1889, as compared with the same month of the previous year.*

STAPLES.	1889.		1888.		TOTAL.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
Coal ...	Tons 6,022	Tons 1,033	Tons 7,353	Tons 2,400	Tons 8,599	Tons 9,713	364	1,113
Cotton, raw ...	51	458	72	74	610	140	364	1,113
Cotton twist and yarn— 1.—European ...								
2.—Indian ...								
Cotton piece goods— 1.—European ...								
2.—Indian ...								
Grains— 1.—Rice ...	1,455	1,177	1,390	3,405	3,031	4,801	1,770	1,770
2.—Others ...	700	1,702	852	3,057	3,852	4,530	678	1,678
Hides and skins— 1.—Hides of cattle— a.—Dressed ...								
b.—Undressed ...								
2.—Skins of sheep, &c.— a.—Dressed ...								
b.—Undressed ...								
Jute— 1.—Raw— a.—Kerrowed ...								
b.—Unkerrowed ...								
2.—Gunny-bags and cloth ...	147	1,122	93	1,325	1,370	1,418	48	148
Metals— 1.—Copper, unwrought ...								
2.—Copper, wrought ...								
3.—Iron ...	926	78	932	80	1,004	1,018	14	14
4.—Tin ...								
5.—Others ...								
Oil— 1.—Kerosene ...	407	2	418	6	409	424	15	15
2.—Others ...	100	40	143	33	239	110	129	129
Orisoods— 1.—Lime ...								
2.—Mustard ...								
3.—Til or gingelly ...								
4.—Niger ...	61	1,840	113	1,500	1,611	1,313	298	298
5.—Castor ...								
6.—Poppy ...								
7.—Others ...								
Provisions— 1.—Rice ...	103	654	116	75	757	191	566	566
2.—Others ...	408	290	408	140	703	681	22	22
Railway plant and rolling-stock ...	2,450	2,450	2,450	2,450	4,700	4,138	562	562
Salt ...	8,011	18	3,203	22	8,029	3,224	4,805	4,805
Sugar— 1.—Drained ...	623	92	603	173	717	676	41	41
2.—Undrained ...								
Tea— 1.—Foreign ...		1,945	6	1,954	1,945	1,600	345	345
2.—Indian ...								
Wood— 1.—Timber ...	3,5	286	94	76	3,551	170	3,381	3,381
2.—Firewood ...	1,437	617	1,434	3	1,437	1,437		
Tobacco ...	60		30	807	867	920	53	53
All other articles of merchandise— 1.—Manufactured ...	2,810	1,092	2,720	1,095	3,002	4,377	1,375	1,375
2.—Manufactured ...								
Hay, straw, and wool (C. & A. E. Section) ...	511		408	2	511	500	11	11
Total ...	27,888	12,958	20,702	23,241	50,870	40,004	10,866	10,866

Comparative Statement of traffic, Eastern Bengal State Railway, for November 1889.

DECREASES.						Tons.
Coal	...	...	...	...	...	1,158
Due to sufficient stock for railway and flotilla purposes.	...	...	...	...	...
Rice	...	...	...	...	...	2,170
The decrease is due to the failure of crops in Bengal.						
INCREASES.						Tons.
Betel-nuts	...	...	...	...	...	566
Due to extensive despatches from Khoolna and C. P. T. Railway.	...	...	...	...	...
Railway plant and rolling-stock	...	...	...	...	...	622
For construction, repair and renewal purposes.	...	...	...	...	...
Salt	...	...	...	...	...	1,805
Due to favourable despatch from Chitpore.	...	...	...	...	...
Tea	...	...	...	...	...	355
Due to favourable despatch from Jalpaiguri.	...	...	...	...	...

CALCUTTA, the 20th February 1890.

F. P. QUINLAN,
Examiner of Accounts.

Bengal Central Railway.

Abstract of principal commodities carried over the Bengal Central Railway during the month of November 1889, as compared with the same month of the previous year.

STAPLES.	1889.		1888.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1888.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	1,797	...	2,303	10	1,797	2,313	...	516
Cotton, raw	1	...	3	...	1	3	...	2
Cotton twist and yarn—								
1.—European	...	...	...	...	...	...	...	...
2.—Indian	...	...	...	...	...	...	...	...
Cotton piece goods—								
1.—European—								
a.—In bales and bundles	205	1	274	...	205	274	...	7
b.—In boxes	...	...	...	...	...	...	...	...
2.—Indian—								
a.—In bales and bundles	...	...	...	...	...	...	...	...
b.—In boxes	...	...	...	...	...	...	...	...
Grains—								
1.—Rice	201	21	7	211	222	218	4	...
2.—Others	49	13	32	199	64	231	...	167
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed	...	...	...	...	...	...	...	...
b.—Undressed	...	...	...	...	...	...	...	...
2.—Skins of sheep, &c.—	...	22	...	17	23	17	6	...
a.—Dressed	...	...	...	...	...	...	...	...
b.—Undressed	...	...	...	...	...	...	...	...
Jute—								
1.—Raw—								
a.—Unscrowed	...	1,802	...	2,611	1,802	2,611	...	809
2.—Gunny bags and cloth	2	...	2	...	2	5	...	3
Metals—								
1.—Copper, unwrought	...	...	...	...	...	...	...	...
2.—Brass, unwrought	...	...	...	...	...	...	...	...
3.—Brass and copper, wrought	...	16	34	15	43	59	...	9
4.—Iron	...	...	...	...	...	...	...	...
5.—Tin	...	...	...	...	...	...	...	...
6.—Others	...	...	...	...	...	...	...	...
Oils—								
1.—Kerosine	114	...	80	...	114	80	34	...
2.—Others	74	...	62	...	74	62	12	...
Oilseeds—								
1.—Linseed	...	...	...	...	...	...	...	...
2.—Rape and mustard	...	...	...	...	...	...	...	...
3.—Til or gingelly	...	...	...	...	...	...	...	...
4.—Niger	16	69	66	78	82	136	...	54
5.—Castor	...	...	...	...	...	...	...	...
6.—Poppy	...	...	...	...	...	...	...	...
7.—Others	...	...	...	...	...	...	...	...
Provisions—								
1.—Betel-nuts	...	651	2	61	651	63	588	...
2.—Others	21	6	14	5	29	19	10	...
Railway plant and rolling-stock	10	24	45	34	38	41	...	3
Salt	301	...	163	...	301	163	138	...
Sugar—								
1.—Drained	...	63	14	149	73	163	...	90
2.—Undrained	...	...	...	...	...	...	...	...
Wood—								
1.—Timber	...	...	10	11	...	21	...	11
2.—Firewood	...	19	25	6	45	31	14	...
Tobacco	...	...	...	...	...	...	...	...
All other articles of merchandise—								
1.—Unmanufactured	...	...	...	...	...	...	...	...
2.—Manufactured	272	107	296	207	379	603	...	224
Total	2,183	2,826	3,427	3,639	6,069	7,066	785	1,997

Comparative Statement of traffic, Bengal Central Railway, for November 1889.

INCREASES.						Tons.
Betel-nuts	...	...	...	...	...	568
Due to favourable market.	...	...	...	...	...
Salt	...	...	...	...	...	138
Due to favourable despatch from Chitpore.	...	...	...	...	...
DECREASES.						Tons.
Coal	...	...	...	...	...	516
Due to sufficient stock for railway and flotilla purposes having been in hand.	...	...	...	...	...
Jute	...	...	...	...	...	809
Due to dullness of the market on account of previous year's crop coming in earlier.	...	...	...	...	...

CALCUTTA, the 20th February 1890.

F. P. QUINLAN,
Examiner of Accounts.

Nalhati State Railway.

Statement showing Increases and Decreases in tonnage of Staples carried over the Nalhati State Railway during the month of January 1890, as compared with the same month of the previous year.

STAPLES.	1889.		1890.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1889.	1890.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal	791	.....	787	.....	794	787	.....	37
Cotton, raw	12	.....	14	.....	12	14	2	.....
Cotton piece-goods—								
1.—European	42	.....	19	1	42	19	.....	23
Grains—								
2.—Rice	39	1,184	39	667	1,186	746	.....	441
3.—Others	30	71	36	37	101	62	.....	39
Hides and skins—								
1.—Hides of cattle—								
a.—Dressed	.....	4	.....	7	4	7	3	.....
b.—Undressed	.....	1	.....	.....	1	.....	.....	1
Jute—								
1.—Raw	.....	23	.....	17	22	17	.....	5
2.—Gunny bags and cloths	24	4	12	4	28	16	.....	12
Leather, manufactured	5	.....	0	.....	5	0	1	.....
Liquors—								
1.—Beer	6	.....	.....	.....	6	.....	.....	6
2.—Wine	1	.....	.....	.....	1	.....	.....	1
Metals—								
1.—Iron	3	.....	18	.....	3	18	15	.....
2.—Others	10	4	8	6	14	12	.....	2
Oils—								
1.—Castor	4	1	1	.....	5	1	.....	4
2.—Kerosene	2	1	1	.....	3	1	.....	2
3.—Others	10	.....	8	.....	10	8	.....	2
Oilseeds—								
1.—Mustard and rape	74	.....	28	.....	79	28	.....	46
2.—Others	0	.....	.....	.....	0	.....	.....	0
Provisions—								
1.—Ghee	3	.....	9	.....	3	9	6	.....
2.—Dried fruits and nuts	2	.....	2	.....	2	2	.....	.....
3.—Others	73	.....	40	.....	73	40	.....	33
Paper and pasteboard	1	.....	.....	.....	1	.....	.....	1
Railway plant and rolling-stock	77	9	65	15	86	68	.....	18
Salt	80	1	24	1	31	25	.....	6
Silk, raw—								
1.—Indian	13	23	62	26	36	99	62	.....
Silk piece-goods—								
2.—Indian	.....	3	2	4	3	6	3	.....
Stone and lime	.....	.....	0	.....	.....	0	.....	.....
Sugar—								
1.—Dressed	24	.....	15	.....	24	15	.....	9
2.—Undressed	24	.....	92	.....	24	92	68	.....
Tobacco	.....	3	1	.....	3	1	.....	2
Timber	5	.....	4	.....	3	4	1	.....
All other articles of merchandise	72	17	143	10	92	167	75	.....
Total	1,388	1,312	1,651	790	2,700	2,241	239	708

INCREASE.

	Tons.
Metals—	
(2) Iron	12
This increase is due to greater demands.	
Silk, raw—	
(2) Indian	62
This increase is due to greater import of tussur cocoons from Raniganj district.	
Sugar—	
(2) Undressed	68
Due to greater import owing to higher rate.	

DECREASE.

	Tons.
Coal	37
Due to previous stock not being exhausted	
Cotton, piece-goods—	
(1) European	23
Due to previous stock not being exhausted.	
Grains—	
(2) Rice	441
Due to less export from intermediate stations, owing to less demand in North-Western Provinces.	
(4) Others	39
Due to less export of <i>katie</i> this year owing to the failure of the crops.	
Jute—	
(2) Gunny-bags and cloths	12
Due to less export of rice.	
Oilseeds—	
(2) Mustard and rape	46
Less imported, bazar being dull.	
Provisions—	
(3) Others	33
Due to potatoes being carried this year by boats.	
Railway plant and rolling-stock	18
Less railway materials carried during the month.	

R. G. MOOKERJEE,
Manager, Nalhati State Railway.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 15th February 1890, on 1,525½ miles open.

	COACHING TRAFFIC		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	215,005	3,05,890 1 0	27,79,978 0	8,49,315 10 0	21,080 15 0	9,70,282 10 0	61,600	83,300	144,900
Or per mile of railway ...	...	200 8 3	...	454 15 0	13 13 2	630 5 1	...	...	...
For previous 6 weeks of half-year ...	1,470,051	10,67,700 0 0	1,45,01,049 20	52,94,695 1 0	1,11,723 13 0	60,74,123 4 0	379,707	500,917	880,624
Total for 7 weeks ...	1,725,100	10,73,596 7 0	1,70,72,024 20	59,43,008 11 0	1,32,810 12 0	60,40,405 14 0	440,315	589,917	1,030,232
COMPARISON.									
Total for corresponding week of previous year ...	231,232	3,00,550 12 0	25,52,873 10	6,23,081 8 0	17,737 9 7	9,52,362 10 7	68,644	98,801	167,445
Per mile of railway corresponding week of previous year ...	...	202 14 8	...	400 12 2	11 9 11	631 4 7	...	...	...
Total to corresponding date of previous year ...	1,708,439	20,04,193 9 8	1,91,28,461 0	41,80,763 12 3	1,04,040 10 0	62,89,623 15 8	440,417	607,903	1,048,320

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Total decrease in 1890.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	
1,525½	9,70,283	634	1,525½	9,70,283	639	1,525½	2,98,20,381	633	1,525½	3,45,45,889	550	...	...

PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for week ended 15th February 1890, on 57½ miles open.

	COACHING TRAFFIC		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	13,106	6,094 0 0	41,509 28	2,719 9 0	40 10 0	9,753 12 0	1,790	615	2,405
Or per mile of railway ...	229	122 1-9	725 30	47 8 9	0 15 10	170 8 4	...	...	...
For previous 6 weeks of half-year ...	71,501	37,567 8 0	1,98,945 10	13,310 9 0	286 8 0	51,177 9 0	9,914	4,462	14,376
Total for 7 weeks ...	84,506	44,652 1 0	2,40,454 30	16,015 2 0	336 2 0	60,031 5 0	11,407	5,017	16,424
COMPARISON.									
Total for corresponding week of previous year ...	13,674	7,310 10 10	24,801 30	1,707 8 0	81 15 0	9,098 12 10	1,859	608	2,467
Per mile of railway corresponding week of previous year ...	239	127 15 9	433 30	29 13 6	0 10 1	154 7 4	...	...	...
Total to corresponding date of previous year ...	83,908	44,475 0 4	2,02,191 10	11,853 7 0	236 8 9	60,594 15 1	13,878	5,888	19,766

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Total decrease in 1890.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	
57½	9,754	168	57½	9,754	171	57½	4,15,356	168	57½	4,48,024	168	17,471	...

Deducted Rs. 330 on account of difference between the approximate and audited figures to 31st December 1889.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 16th February 1890, on 231 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	22,600	Rs. A. P. 5,651 10 0	Mds. s. 17,085 10	Rs. A. P. 502 2 0	Rs. A. P. 5 3 0	Rs. A. P. 5,219 13 0	584	54	638
Or per mile of railway	224 0 1	254 0 1	.....	22 4 3	0 4 6	279 2 0	.....	.....	.....
For previous 5 weeks of half-year	113,202	27,579 7 0	75,128 0	2,580 8 0	41 10 0	30,190 8 0	5,000	509	5,509
Total for 5 weeks	135,802	33,231 1 0	90,213 10	3,131 10 0	47 13 0	30,410 8 0	5,584	561	6,145
COMPARISON.									
Total for corresponding week of previous year	75,684	5,713 12 2	9,648 10	342 3 0	3 0 0	7,055 15 2	890	79	969
Per mile of railway corresponding week of previous year	.....	801 11 11	.....	15 6 0	0 2 2	317 4 1	.....	.....	.....
Total to corresponding date of previous year	137,360	34,920 15 6	62,118 20	7,163 3 0	44 15 9	37,135 2 3	6,086	435	6,521

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 16TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 16TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 16TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 16TH FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1889.
Mean passengers worked.	Receipts.	Per mile worked.	Mean passengers worked.	Receipts.	Per mile worked.	Mean passengers worked.	Total receipts.	Per mile worked.	Mean passengers worked.	Total receipts.	Per mile worked.	Rs.	Rs.
224	Rs. 2,540	Rs. 117	221	Rs. 2,520	Rs. 120	221	Rs. 2,44,017	Rs. 120	221	Rs. 2,40,063	Rs. 123	.....	Rs. 3,954

* Deducted Rs. 3-4 on account of difference between the approximate and audited figures to 31st December 1889.

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B. Dacca, K. and D., and ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 8th February 1890, on 747 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steamboat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	213,600	Rs. A. P. 93,920 0 0	Mds. s. 5,53,490 0	Rs. A. P. 1,00,490 0 0	Rs. A. P. 19,380 0 0	Rs. A. P. 2,13,700 0 0	23,147	28,264	51,411
Or per mile of railway	286	126 0 0	741 0	134 0 0	26 0 0	283 0 0	.....	.....	.....
For previous 5 weeks of half-year	704,200	5,64,930 0 0	29,90,080 0	5,07,040 0 0	84,011 0 0	11,06,480 0 0	102,124	165,808	270,722
Total for 5 weeks	917,700	4,48,860 0 0	35,40,470 0	7,08,080 0 0	1,03,360 0 0	13,20,270 0 0	128,271	193,770	322,041
COMPARISON.									
Total for corresponding week of previous year	177,248	31,800 0 0	4,30,463 0	67,063 0 0	16,073 0 0	1,06,537 0 0	23,070	23,786	46,856
Or per mile of railway corresponding week of previous year	237	122 0 0	640 0	101 0 0	21 0 0	224 0 0	.....	.....	.....
Total to corresponding date of previous year	632,011	4,20,860 0 0	28,57,283 0	5,90,463 0 0	94,400 0 0	11,05,546 0 0	128,068	159,323	287,391

* Excluding steamer earnings.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 21st FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 21st FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 21st FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 21st FEBRUARY 1890.			Total increase in 1890-89.	Total decrease in 1889-88.
Mean passengers worked.	Receipts.	Per mile worked.	Mean passengers worked.	Receipts.	Per mile worked.	Mean passengers worked.	Total receipts.	Per mile worked.	Mean passengers worked.	Total receipts.	Per mile worked.	Rs.	Rs.
286	Rs. 1,04,037	Rs. 147	281	Rs. 1,03,700	Rs. 140	281	Rs. 99,47,033	Rs. 133	281	Rs. 99,40,505	Rs. 133	Rs. 6,532	.....

* Audited up to week ending 14th December 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	30,870	11,330 0 0	57,810 0	8,290 0 0	100 0 0	14,820 0 0	8,736	1,936	8,672
Or per mile of railway	246	92 0 0	463 0	26 0 0	1 0 0	118 0 0			
For previous 5 weeks of half year	153,330	56,620 0 0	2,91,234 0	41,300 0 0	500 0 0	61,800 0 0	17,078	3,882	20,960
Total for 6 weeks	184,200	67,950 0 0	3,49,044 0	49,590 0 0	600 0 0	76,620 0 0	24,814	5,818	30,632
COMPARISON.									
Total for corresponding week of previous year	34,230	10,017 0 0	56,303 0	2,970 0 0	64 0 0	13,051 0 0	8,739	1,937	8,676
Per mile of railway corresponding period of previous year	274	80 0 0	460 0	24 0 0	1 0 0	104 0 0			
Total to corresponding date of previous year	167,138	54,072 0 0	2,76,341 0	13,134 0 0	3,739 0 0	71,399 0 0	21,374	11,978	33,352

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 5TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 8TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 5TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 8TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
125	22,051	104	125	14,520	116	125	6,17,551	110	125	6,46,618	115	29,461	

* Audited up to week ending 14th December 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 8th February 1890, on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	16,900	6,340 0 0	24,720 0	2,700 0 0	210 0 0	9,250 0 0	2,402	794	3,196
Or per mile of railway	196	74 0 0	287 0	31 0 0	3 0 0	106 0 0			
For previous 5 weeks of half year	78,230	24,370 0 0	1,61,960 0	16,840 0 0	950 0 0	48,800 0 0	11,536	4,196	15,732
Total for 6 weeks	95,130	30,710 0 0	1,86,680 0	19,540 0 0	1,160 0 0	54,950 0 0	13,972	4,990	18,962
COMPARISON.									
Total for corresponding period of previous year	14,100	4,410 0 0	9,370 0	1,092 0 0	644 0 0	6,040 0 0	2,402	622	3,024
Per mile of railway corresponding period of previous year	164	52 0 0	109 0	13 0 0	8 0 0	70 0 0			
Total to corresponding date of previous year	69,254	20,602 0 0	69,000 0	7,416 0 0	1,126 0 0	24,188 0 0	10,934	3,861	14,795

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

RECEIPTS FOR WEEK ENDING 5TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 8TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 5TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 8TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	9,040	70	86	9,240	106	86	2,55,621	67	86	2,50,678	68	61,840	

* Audited up to week ending 14th December 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 15th February 1890, on 27½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND GENERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	3,876	1,544 0 0	12,188 0	881 0 0	19 0 0	2,126 0 0	800	880	268
per mile of railway ...	151	60 0 0	447 0	31 0 0	1 0 0	79 0 0	...	...	...
for previous 5 weeks of half-year ...	17,164	5,971 0 0	76,400 0	4,677 0 0	80 0 0	10,728 0 0	2,436	1,378	4,221
Total for 6 weeks ...	20,740	7,518 0 0	88,588 0	5,558 0 0	99 0 0	12,856 0 0	3,236	1,658	5,014
COMPARISON.									
Total for corresponding week of previous year ...	3,813	1,323 0 0	12,938 0	837 0 0	8 0 0	2,187 0 0	508	991	1,600
per mile of railway corresponding week of previous year ...	129	50 0 0	478 0	31 0 0	...	80 0 0	...	...	...
Total to corresponding date of previous year ...	21,867	8,235 0 0	1,06,808 0	6,774 0 0	108 0 0	14,114 0 0	3,417	3,868	7,375

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1888-89.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27½	2,126	80	27½	2,126	78	27½	20,328	76	27½	24,900	74	...	...

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 15th February 1890, on 273 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND GENERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	40,417	20,945 0 0	5,35,231 0	38,891 0 0	4,375 0 0	63,661 0 0	5,103	9,918	15,068
per mile of railway ...	170	76 0 0	1,931 0	141 0 0	3 0 0	230 0 0	...	...	...
for previous 5 weeks of half-year ...	243,762	1,27,500 0 0	15,72,237 0	1,66,438 0 0	28,476 0 0	3,11,494 0 0	28,640	48,707	86,281
Total for 6 weeks ...	320,169	1,48,500 0 0	17,07,471 0	1,95,329 0 0	32,851 0 0	3,75,155 0 0	41,607	59,312	100,719
COMPARISON.									
Total for corresponding week of previous year ...	51,057	21,688 0 0	1,27,119 0	12,290 0 0	3,094 0 0	38,371 0 0	5,594	6,204	11,798
per mile of railway corresponding week of previous year ...	190	79 0 0	802 0	45 0 0	4 0 0	131 0 0	...	...	...
Total to corresponding date of previous year ...	270,614	1,03,400 0 0	9,19,397 0	85,182 0 0	21,414 0 0	2,09,982 0 0	27,900	37,607	75,507

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1888-89.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
273	20,371	141	273	20,371	123	273	14,80,453	123	273	19,62,001	125	6,02,000	...

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.						Rs.
Approximate earnings for week ending 25th January 1890	...	...	...	...	...	8,470
Corresponding period of 1889	...	...	...	...	...	8,450
Increase	...	...	...	...	...	20
Receipts per mile for week ending 25th January 1890	...	...	...	...	...	Rs. A. P. 108 1 3
Corresponding period of 1889	...	...	...	...	...	103 11 0
Increase	...	...	...	...	...	0 6 3
Receipts from 1st to 25th January 1890	...	...	...	...	...	25,983
Corresponding period of 1889	...	...	...	...	...	24,788
Increase	...	...	...	...	...	1,195

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.						Rs.
Approximate earnings for week ending 1st February 1890	...	...	...	...	...	7,924
Corresponding period of 1889	...	...	...	...	...	8,180
Decrease	...	...	...	...	...	256
Receipts per mile for week ending 1st February 1890	...	...	...	...	...	Rs. A. P. 141 10 4
Corresponding period of 1889	...	...	...	...	...	160 6 6
Decrease	...	...	...	...	...	18 12 2
Receipts from 1st January to 1st February 1890	...	...	...	...	...	33,207
Corresponding period of 1889	...	...	...	...	...	32,969
Increase	...	...	...	...	...	238



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MARCH 5, 1890.

OFFICIAL PAPERS.

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Abstract of the Proceedings of the Council of the Lieutenant Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

The Council met at the Council Chamber on Saturday, the 22nd February, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding*.

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General*.

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

The HON'BLE T. T. ALLEN.

The HON'BLE SIR HENRY HARRISON, K.T.

The HON'BLE SIR ALFRED CROFT, K.C.I.E.

The HON'BLE DR. MAHENDRA LAL SIRCAR, C.I.E.

The HON'BLE C. H. MOORE.

The HON'BLE H. PRATT.

The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASHI BEHARY GHOSE.

CALCUTTA PORT BILL.

The Hon'ble SIR HENRY HARRISON moved that the clauses of the Bill to consolidate and amend the law relating to the port of Calcutta, and to the appointment of Commissioners for the said port, be further considered for settlement in the form recommended by the Select Committee.

He said:—"In moving that the Bill be taken into further consideration, I would like to say one word regarding the notice, which I have given for the suspension of the Rules. I am in hopes we may find that there is no matter of serious controversy between us to-day, and therefore there is no reason why the Bill should not be passed at this meeting of the Council. At the same time I will not press that motion, if we find that there is any considerable difference of opinion. I may say that there is nothing further from my mind than to ask the Council to rush the Bill through, or to force its hands in any way. But supposing we find the remaining sections are settled by general agreement, it seems a great pity that the Legislative Council should be called together for a formal matter. It will depend a great deal upon the course the proceedings may take."

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved that the following proviso be added to section 96 of the Bill:—

Provided that any order made and published under this section which shall have the effect of rendering it unlawful to land or ship any goods out of or into any vessel at any wharf, quay, stage, jetty or pier made by any private person for the convenience of private traffic shall entitle the owner thereof to sue for compensation, and to recover the same compensation, if any, that he would have been entitled to sue for and recover, had the wharf, quay, stage, jetty or pier been removed, filled up, or destroyed under the provisions of section eighty-five.

He said:—"The amendment I move should be considered from two different points of view. On the most important, viz. the point of principle, I have found myself entirely in accord with the hon'ble member who represents the views of the Chamber of Commerce, and that is, that if any jetty, wharf or other structure is closed under section 96, there is no reason why the owner should be put in a worse position than when it is dealt with or destroyed under section 85. It may be because there is a certain affinity between shallowness and clearness; but, certainly, whatever the cause may be, it seems to me manifestly clear that section 96 is not intended as a section for evading the principle we have conceded in section 85. If the existence of any private wharf, jetty or other structure is disadvantageous to the good administration of the port, or interferes with the navigation of the river, it becomes the duty of the Port Commissioners to obtain the leave of the Government to close it or to remove it; or it may enter into terms with the owner of the wharf or jetty for the proper use of it under section 95.

"The primary object of section 96 is, that when the Commissioners have been at the expense of putting up wharves for the convenience of the public, the well-being of the trade of the port may depend upon the Commissioners being able to put such wharves to their full use; for if that cannot be done, then the loss would be incurred simply at the expense of the trade of the port. Therefore, it is necessary that the Commissioners should have power to insist upon the trade coming to the wharves which they have provided.

"Incidentally, that gives them ample power of acting against private jetties or wharves which they may have allowed to stand under section 85; because they may say that, all the trade within a certain distance, must come to their jetties and wharves, and therefore the use of any other jetties or wharves which may have been in use up to that time must be stopped. At the same time it seems perfectly clear that, it will not in the least degree be just that the Commissioners should be put in a better position than if they had dealt with the jetties and wharves under section 85. Therefore, the intention is, that the owners of these private structures should be placed in precisely the same position as regards the right to compensation, as they would have been if the Port Commissioners had thought fit to proceed directly under section 85.

"It may be said that you ought not to give the same compensation for jetties which are allowed to stand, as for those which are removed. This is a small point, and the objection appears to me insignificant. If you do not deprive them of the jetty itself, but only close it, possibly it may be of some material use; but, even in that case, I think it far better to safeguard the interest by saying that they shall have the same right to compensation which they would have had, if the jetty had been removed altogether, than to make any wire-drawn distinction as to what deduction should be made from the compensation. So much as to the principle, and I hope the Council will be entirely in accord as regards the principle.

"Then comes the other difficulty as regards its wording. A difficulty arises as regards the omission or inclusion of the word 'docks' which cannot be avoided, because section 85 makes no allusion to private docks. Section 85 only refers to the removal of structures below high-water-mark, whereas section 96 refers to docks. It says:—

'When any dock, wharf, quay, stage, jetty or pier for receiving, landing, or shipment of goods from vessels (not being sea-going vessels) shall have been made and completed with all proper appliances in that behalf, it shall be lawful for the Commissioners in meeting, with the sanction of the Local Government, by an order published in three consecutive numbers of the *Calcutta Gazette*, to declare that such dock, wharf, quay, stage, jetty or pier is ready for receiving, landing, or shipment of goods from vessels (not being sea-going vessels); and in the same way to order that within certain prescribed limits, to be therein specified in that behalf, it shall not be lawful, without the express sanction of the Commissioners to land or ship any goods out of, or into, any vessel (not being a sea-going vessel), of any class specified in such order, except at such dock, wharf, quay, stage, jetty or pier.'

"As a matter of fact there are no docks in existence for landing and shipping goods from inland vessels, and if they exist, they must be on private land. Therefore, there is this difficulty. If we put in the word 'dock,' then we have the difficulty in regard to section 85; and if we omit the word 'dock,' then we do not meet the case of a dock being found within the limits of the port. But as matters stand, it is not a matter of consequence, because there are no such docks in existence; and it is extremely improbable that any private person will be at the expense of constructing a dock for the loading and unloading of goods from inland vessels: as for that purpose, jetties or wharves are so manifestly more convenient.

"If the Hon'ble Mr. Moore thinks that the section would be improved by the insertion of the word 'docks,' then the Council would be in a difficulty, because we should be referring to a section which did not authorise it. But the better course seems to me to be to leave out the word 'docks,' seeing that there are no docks of this kind to be closed. You will see that the Hon'ble Mr. Moore has withdrawn his amendment in which the word 'docks' was inserted, but I think he will raise no objection to the word being omitted in this section; and therefore I move that the following proviso be added to section 96 of the Bill:—

'Provided that any order made and published under this section which shall have the effect of rendering it unlawful to land or ship any goods out of or into any wharf, quay, stage, jetty or pier made by any private person for the convenience of private traffic shall entitle the owner thereof to sue for compensation, and to recover the same compensation, if any, that he would have been entitled to sue for and recover, had the wharf, quay, stage, jetty or pier been removed, filled up, or destroyed under the provisions of section eighty-five.'

The Hon'ble Mr. MOORE said:—"I would explain that I withdrew my amendment to section 96 on the understanding, there was some technical objection to it; and because to the best of my belief, the one submitted by the Hon'ble Sir Henry Harrison meets the principles I have been contending for, of proper compensation being made for acquire of private property, which has already been admitted and legislated for by this Council in section 85 now passed, and has just been clearly expressed again by the Hon'ble Sir Henry Harrison. This reform, however, would have been entirely nullified if section 96 were left as it now stands in the Bill; for it gives absolute powers of closure of private wharves, which is of course exactly equivalent in effect to seizure and removal under section 85, without any provision for compensation to the parties injured, and a very serious injury might be done, if, for instance, for power to ship and land goods at their doors, there were substituted a mile or so of cartage to ship and

land goods at a Commissioners' jetty distant from them which, under this section, the Commissioners have power to enforce upon any private person, should it suit their purposes to do so.

"I have no objection to the omission of the word 'dock,' because the section deals with landing and shipping, and in the interpretation chapter of the Bill, the word 'wharf' is described as referring to any place used for landing and shipping goods. I trust there is no necessity to urge on the Council to carry this amendment; and that the argument against it may not be brought forward that, because it was not done in 1870, when the subject was thoroughly threshed out, it should not be done now. The principles involved in the alterations in these sections were not threshed out in 1870. No one interested noticed or foresaw the effects of the sections as passed, nor the gross abuses of power to which it might lead, until actual experience forced it upon public notice.

"That experience found in the manipulation of this very section 96, as set forth in the memorial of the Chamber of Commerce, I can assure this Council, contains no exaggeration at all, and is in itself ample justification for the addition to it of the proviso moved by the Hon'ble Sir Henry Harrison. It conveys, I believe, nothing more than the acceptance of the principle now contained in section 85, and admitted at our last meeting in the plainest terms by the Hon'ble Messrs. Peacock and Nolan, as an undisputably fair axiom, viz., that private property must not be subjected to summary confiscation, but only made liable when circumstances of public need necessitate it to be acquired on payment of proper compensation.

"I would add one point. I am not sure whether, as the section now reads, it is necessary to get the sanction of the Local Government before notifying the closure of a private wharf. I only read it to apply to notifying that the Commissioners' wharf is ready. If, therefore, such is the reading, I would wish to move that the necessary words be added to make it obligatory on the Commissioners to obtain the Local Government's sanction to the Act before closing a private wharf."

The Hon'ble MR. NOLAN said:—"I rise somewhat early in this discussion, because, while quite accepting the principle of this amendment, I see objections to the manner in which it is worded, and think that, before it can be accepted, it should be recast. In the first place, it confines the payment of compensation to cases in which orders are issued under section 96 closing wharves to country boats; although it seems that, on the principle enunciated by the last speaker, and accepted by the mover, compensation should also be given where wharves are closed to sea-going vessels by an order under section 96. And in the second place, I consider that the compensation, when allowed, is calculated on a wrong principle, and is excessive in amount. The amendment would entitle the owner of a wharf or pier to be compensated for a simple prohibition to land one class of goods to the full amount which he could claim, if his wharf had been entirely destroyed. This is a novel rule, and I fail to see anything in its favour. Take, for example, a wharf constructed to land coal from sea-going vessels; if, by an order under section 96, the Port Commissioners prohibit the owner from using it for country boats, they probably do him no harm whatever, and it would be absurd to make them pay as if they had altogether annihilated the value of his property. It should be remembered that the definitions of the Bill are very wide—almost anything near the river may be treated as a dock or pier, or wharf, and its full value demanded on the issue of an order of the kind contemplated. I do not understand how the Hon'ble Sir Henry Harrison stated that, there is no private dock in Calcutta; a 'dock' being defined to include 'all wharves, warehouses, and tramways.' [SIR HENRY HARRISON:—"Appertaining to a dock."] That is so; but a 'wharf' is defined as including any foreshore used for loading, a pier to include any floating barge or pontoon, for whatever purpose used. Now, if we prohibit landing certain goods on a foreshore, should we, as now proposed, pay the full value of the foreshore? It remains useful for other purposes. And if we pass a similar order in regard to a pontoon, must we give the price of the pontoon as if it had been consumed by fire? The measure of compensation should be the loss caused by the order passed, not the loss which would accrue had action been taken of a nature entirely

different. The matter will become very serious if the port extends or changes. This is not like the section we discussed last Saturday, a provision never enforced, but the key to the whole work of the Port Commissioners.

"I am inclined, also, to think that the principle on which compensation is to be assessed should be considered further, with a view to excluding the large claims which will be made on account of loss by port dues. These dues will be useless, if the Commissioners have to indemnify beforehand those who will have to pay them. The amendment has not been long in the hands of members, and I have but recently considered it in detail, being under the impression that it was accepted by all parties, and would be found unexceptionable. I am not, therefore, prepared with a draft embodying the view put forward, but hope that the member in charge of the Bill may be able to meet these objections by modifying his motion."

The Hon'ble Mr. ALLEN said:—"When I first saw the amendment standing in the name of the hon'ble member in charge of the Bill, I had resolved to offer the strongest opposition I could find to urge against it; but that determination was afterwards somewhat modified by the consideration that, under the present condition of things, it has little or no practical bearing. But the amendment offends grievously against principle, the common principle of honesty.

"The Hon'ble Sir Henry Harrison and the Hon'ble Mr. Moore have both treated this amendment of section 96 as if it was simply an appendage to the amendment of section 85, which the Council accepted on the last occasion. This I regard as an entire mistake. The provisions of section 96 are totally and altogether separate from any of the provisions contained in section 85, nor do they relate to the same state of things. Section 96 operates on the port as it now exists. Section 85 comes into operation only in the event of the port being extended.

"On the last occasion you, Sir, were pleased to remark that the whole discussion stirred up by the Chamber of Commerce was for nothing better than a phantom. The amendment which is now before the Council is a provision to guard against danger from the accident of a phantom. Were this matter on the footing on which both the Hon'ble Mr. Moore and the Hon'ble Sir Henry Harrison have treated it, I should no more think of offering a word of opposition, than I would if the Hon'ble Sir Henry Harrison had chosen to stand godfather to a provision to secure damages for infringement of patent to those joint-stock companies of Laputa, who held exclusive right of extracting sunbeams from cucumbers. Under present conditions, no practical effect can follow either from the section itself or the amendment.

But, as a matter of fact, there may arise circumstances when they would assume importance. A serious principle is involved in the amendment before the Council; and, under certain conditions, the question may become one of practical importance. Our section 96 of the Bill is no new section. The Justices for the Port of Calcutta were appointed in 1866, when, for the first time, an attempt was made to afford facilities in the landing and shipping of goods; and they were vested with certain powers. Among those powers were these, that when they had provided sufficient facilities for discharging and loading, they should have the right to insist upon ships using those facilities and paying tolls for them. Those powers had been given by the Act of 1866, and were continued in the Act of 1870, which distinctly gave a monopoly of the right to levy tolls; and the latter part of this section, by which they were authorised to forbid the use of other places than those they had provided, was simply the means by which that monopoly was declared.

"Furthermore, a section was put into the Act (section 33 of Act V of 1870) by which they were strictly prohibited from alienating any powers which, under the Act, they had acquired. The case under this section is exactly similar to that of a public ferry. As soon as a public ferry is established and let to a farmer, that farmer is entitled to a monopoly to cross over passengers within a distance of two miles below and two miles above his ferry. Within that distance of four miles no person can run a ferry in opposition to him. This is the principle which the section of Act V of 1870, as it stands, rigidly insisted upon.

"Now, Sir, having created this monopoly in favour of the Port Commissioners, they were by Act IV of 1880 authorised to go into the market and borrow money on the security of their monopoly, and by the same Act their

tolls were pledged to the public as security. The amendment which is now before the Council distinctly cuts at the root of that monopoly. It recognises the right of private competition with the Port Commissioners; and having destroyed the monopoly, it says that, before the Commissioners can re-establish that monopoly, they must buy up all the rights along the bank of the river. I consider, therefore, Sir, that in passing this amendment, we shall be guilty of a serious breach of faith with those persons who have advanced their money.

"It may be quite possible that the assets in the hands of the Port Commissioners are sufficient to meet all liabilities. But be that as it may, I consider the Council should not, after having passed an Act pledging certain rights and certain revenues as security, come forward now, and without the consent of the debenture-holders, without even consulting them as far as I know—probably if they had been consulted they would have consulted Mr. Woodroffe, and we should have had a separate opinion as to how these persons' (the creditors) interests will be affected, then perhaps the Council would have been in a position to select a safe path on which to travel by taking the resultant of the conflicting responses. But without the consent of the debenture-holders, and without any regard for their interests, and without consulting them, to cut down the monopoly by these words will, it appears to me if the proposal be carried, reflect no credit on this Council.

"As a matter of fact, however, I believe that no result will follow under the present condition of things, even were the legal monopoly cut away; and for this reason, that between Kidderpore and Cossipore, the present practical limits of the port, the whole of the foreshore on this side of the river is already the property of the Port Commissioners. Though legally the monopoly would be destroyed, practically the monopoly would be continued, and for this reason I do not think it worth while to offer much opposition to the proposal. But I must insist on the point of principle. I must point out that if such circumstances arise as that this foreshore between Kidderpore and Cossipore should not be available for the landing and shipping of goods, and it should become necessary that the shipping be sent further down where the whole foreshore belongs to private individuals, the consequences, if this amendment stands in the law, would be something beyond all calculation in the way of expense. As long as the monopoly of tolls exists in the Commissioners, whether this part or some other part of the river bank is used for shipping, it is perfectly immaterial to the debenture-holders. As long as the shipping comes to the river, and the tolls are levied, their security will be untouched. But if the monopoly be taken away, and anything happened to compel the Port Commissioners to remove their operations where the wharfage rights of every foot of the land would have to be bought, it appears to me that the security of the debenture-holders would be uncommonly weak.

"We know that at present the general opinion about the docks at Kidderpore is, that they are very likely to prove a white elephant, to provide provender for which may use up a large part of the surplus resulting from the other sources of revenue which the Port Commissioners enjoy. This may be true or it may not be true, still its possibility ought to be a reason why caution should be exercised in touching in any way the security upon which money has been advanced.

"In the definition of 'wharf' which is given in this Act, it will be found that the word 'wharf' includes 'any bank of the river which may be improved to facilitate the loading or unloading of goods.' Suppose now that the river between Kidderpore and Cossipore became useless, six coolies working for six days on the banks at Garden Reach would create a wharf, and every owner who has a frontage to the river can thus, by sloping off a part of the bank, create a wharf, by which he would be entitled to compensation at any time, should that neighbourhood be afterwards utilised by the Port Commissioners for discharging cargo. The amount of compensation for which the Commissioners would thus be rendered liable would be vastly greater under those circumstances, than possibly either the Hon'ble Sir Henry Harrison or the Hon'ble Mr. Moore has any idea of. I take it that, when a jetty-builder comes in under section 85, the measure of compensation he would receive from a Civil Court would be at least twenty years' purchase of the toll on every bale of goods that passes over the wharf destroyed, and twenty years' purchase of the cartage to which he would be rendered liable by the removal of his jetty. If, therefore, circumstances should give any practical effect to this amendment, the expense would be such as to swamp the Port Commissioners completely.

"I think, therefore, that, on the question of principle, which is what I am mainly interested in, the Council will be wise to allow the law to stand as it has existed for the last twenty-four years, and as it has again been enacted by the Government of India in the Act passed ten years ago for the port of Rangoon, and which principle is also asserted in the Act passed by this Council three years ago for the port of Chittagong. By letting this amendment come into our Act, we shall break completely adrift from all the Port Acts passed for this side of India from the commencement.

"If the debenture-holders had been consulted, it is highly probable they would have taken the opinion of Mr. Woodroffe; and there can be little doubt what the opinion of Mr. Woodroffe would have amounted to, had he been consulted. It is safe to say that Mr. Woodroffe would have concluded thus: 'If the Bengal Council accept the amendment of section 96 proposed by the Hon'ble Sir Henry Harrison, the Government of India should be memorialised to withhold its assent to the Act.'"

The Hon'ble Sir Charles Paul said:—"When the poor inhabitants of the Suburbs of Calcutta set up a cry that they would be ruined by the excessive taxation to which they would be subjected by reason of the extension of the municipal limits, I think the mover of the new Municipal Act told them that it could not be helped, because the extension of the municipal limits was necessary for the improvement of the health of Calcutta, and that private circumstances and private losses must give way to the public good. I think that precisely the same argument will apply here, that it is necessary for the improvement of the port of Calcutta, that the Port Commissioners should be armed with powers for re-imbursing themselves for the duties incident to their office.

"The Port Commissioners have, for a great many years, kept the river in a proper state, and incurred considerable expense: the gentlemen who have private wharves have had the benefit of all that expense without paying anything towards it; and from the point of view I look at it, they have been sufficiently remunerated for any private wharves they have constructed, namely, they have had the use, without paying for the improvement of the river which enabled them to use those wharves.

"Now, on principle, what is the grievance of which they complain? As to the analogy which has been put forward by the Hon'ble Sir Henry Harrison with an air of fairness, I wish to say a word. I shall presently show that there is no analogy between the two cases. They cover entirely different grounds, and come under entirely different heads. They complain that, they have hitherto been in the habit of landing and shipping their goods in a convenient way at wharves erected by themselves; that, by extending the limits of the port so as to include those wharves within such limits, they will be disabled from using the conveniences which they had been using before, and they will be compelled to pay tolls for the landing and shipping of their goods. That is the main inconvenience that is thought of here, and I hardly think that the compensation which they claim is simply the value of the structure or thing which they have put up. If that is all, the loss which they will suffer will be very little indeed, because they have had the use of those structures for a number of years. But they wish to get some means of recouping themselves with regard to the tolls which they will have to pay; or, in other words, they wish to get a monopoly of their own against other persons, their competitors in trade.

"The object of the amendment is to put them into a more favourable position; but if that object is once perceived, it is enough for the Council to say that such a position cannot be tolerated. If the object is simply to have the value of their structures, wharves, jetties and so forth, then by all means let it be put in exact words, namely, that where a person is deprived of the use of a wharf by reason of the operation of section 96, the Port Commissioners shall pay him the present value of the wharf, plus the appliances used with such wharf. Let the amendment be so devised, but the present vague way of putting it, is objectionable. I will now refer to an Act of Parliament by which privileges have been taken away without the grant of compensation. The Statute, 16 and 17 Vic., Cap. 93, was passed for the levy of tolls in certain harbours in Scotland.

"Under the provisions of this Act, the Burghers were entitled to apply it. If they did not wish to apply it, they need not. But if they applied it, the

effect produced by section 15 was the abolition of all exclusive privileges, and the levy of tolls equally on all persons. Here is an Act which, when applied, took away all privileges which had previously existed without providing compensation. Now the object of the Hon'ble Sir Henry Harrison's amendment is, to give compensation for this privilege of landing and shipping goods from private wharves.

"I say that the object of section 96 is to take away a privilege which these persons have hitherto enjoyed, and the idea of putting every person on precisely the same footing is not inequitable, if it be conceded that the object is the improvement of the navigation of the river. And that being so, no compensation should be given. Although section 96 provides for no compensation, yet this amendment says that compensation may be given for the immediate results of that provision. What is the meaning? The proposed proviso says, 'to recover the same compensation that he would have been entitled to sue for and recover, had the wharf, &c., been removed, filled up, or destroyed under the provisions of section 85.' Under this section, a claim may be made for the value of the structure and all the profits derived therefrom; in other words, the capitalised amount which will represent the value of the tolls and appliances for twenty years. No doubt, the amendment has been made as guarded as it possibly can be. Still there is a difficulty about it, and I say that, if the amendment is persevered with, it must be drafted on other lines. The exact thing for which you are to pay compensation must be stated.

"Now, it is stated by the Hon'ble Sir Henry Harrison that, if you pay compensation for the removal of a jetty, why should you not also pay compensation for prohibiting the use of a jetty? I shall give a very short answer to that. I say that they are two very different things. The removal of a wharf prevents the person who had that wharf from using it. But a prohibition to use a particular wharf does not necessarily have the same effect as its removal. If the Commissioners do not remove or destroy a particular wharf or jetty, and allow such wharf or jetty to remain, they are entitled under the provisions to permit the use thereof. There appears to be no impediment to their entering into a contract for the landing and shipping goods as before upon the payment of tolls, less the value of labour and appliances.

"The argument by analogy is a powerful argument, if you can show the analogy. The difficulty is to show the analogy.

"There is another objection. This Bill is, divided into various parts. Now section 85 comes under Part VII, 'Of the erection of wharves, quays, stages, jettys, piers or moorings,' and section 85 allows of the removal or destruction of private wharves, &c. Then we come to Part VIII of the Bill, regarding the landing and shipment of goods. These two parts of the Bill treat of two distinct matters. One has nothing to do with the other.

"One further remark remains, and that is, the exceptional character of the legislation proposed. The Hon'ble Mr. Nolan has pointed out—and I think it is the very best possible answer to give—that if section 96 is to be amended in this way, section 94 should also be amended. The general commercial interests under section 94 are not represented; but though they are not represented, as no claim is advanced, you are bound to give those who will be affected under section 94 compensation in the same way as is proposed under section 96. We have a small conclave of jetty-owners coming forward who have been described as the possessors of property of enormous value on the banks of the river, and we have been called upon to pass this exceptional legislation to meet a clamour which has been raised. That is a matter to which I do not think we should yield."

The Hon'ble DR. RASH BEHARY GHOSE said:—"I accept, without the slightest reservation, the principle which underlies the amendment of the hon'ble member in charge of the Bill, the right to claim compensation being, as I understand, confined to cases in which the works mentioned in the amendment have been lawfully erected, or have been used for a very long time. It has been said that if the principle is sound, it ought to hold good also in the cases provided for by section 94 of the Bill: that may be so. But that is no answer to the amendment which has been proposed by the Hon'ble Sir Henry Harrison, because, I take it that two wrongs cannot make a right. It may be a perfectly good reason for adding a similar amendment to section 94; but surely, it is no reason whatever for saying that, although in other respects the principle is a good and proper one, it ought not to be accepted because you have not applied

it to a certain class of cases to which, if the principle is a proper principle, it ought to apply?

"The Hon'ble Mr. Allen, who spoke in opposition to the amendment, pointed out in the first place that a provision similar to that contained in section 96 had been in the Statute Book since the year 1866, and that nobody ever thought of making any complaint till the Hon'ble Mr. Moore, or rather the Chamber of Commerce whom he represents, thought of objecting for the first time when the present Bill was before the Select Committee. The whole contention, if I may say so, is, that the injustice was perpetrated long ago, and that therefore it should be left unredressed. But if the principle recognised by the amendment is a proper one, I do not think that the mere fact, that the wrong has been in existence for thirty or for fifty years can invest it with the privilege of prescription. The Legislature is not fettered by any statute of limitations.

"I will assume for the purposes of my present argument that, the principle of allowing compensation is a proper principle. If it is not, there is an end of the question. But assuming that it is a proper principle, are we to refrain from applying it, because it is going to be applied for the first time in 1890? Wrongs do not cease to be wrongs, simply because they are ancient wrongs. I would on this point only refer the Hon'ble Mr. Allen to that well-known work, *Guilliver's Travels*, from which he borrowed his allusion of extracting sunbeams from cucumbers. I confess I am not much pressed by the argument that, we should be doing a wrong to the debenture-holders, if we accepted the principle of giving compensation for injuries done to private persons. I think that the owners of private wharves have their rights, which ought to be protected at any rate to the same extent as those of the debenture-holders. And we cannot overlook the rights of these owners out of tenderness for the interests of the debenture-holders (holders of merely floating securities as they are very properly called) who, we are told, invested their money on the faith of a tacit pledge that our statutes, like the laws of the Medes and Persians, are to remain unchanged throughout all time.

"Then, it is said that the Kidderpore Docks are likely to prove a white elephant. Many people, I think, besides the Hon'ble Mr. Allen, are of that opinion. [Mr. Allen:—"I did not say that, that is my opinion. I said that many people held that opinion."] Then I beg the hon'ble member's pardon. However, it has been said by a great many people that the new docks are likely to prove a white elephant. If such should unfortunately be the case, I do not see any reason why the owners of private wharves are to be singled out for the honour of feeding that rather expensive animal. I am not aware, nor has it been suggested, that there is any provision in any Act now in force, which renders it absolutely unlawful for private individuals to have wharves for any of the purposes mentioned in section 96; and, as I have already said, it is only when a thing has been erected lawfully or is being used for a lawful purpose, that we propose to give compensation.

"But while agreeing with the Hon'ble Sir Henry Harrison as to the principle, I am unable to agree with him as to the measure of compensation which should be allowed in such cases. It has already been pointed out very forcibly by the Hon'ble Sir Charles Paul that, when you render a particular use of a particular building or work unlawful, you do not destroy the thing itself; and that the measure of compensation applicable in the one case, cannot be properly applied in the other case.

"It has also been pointed out that, if the section is allowed to stand as it is, it must open a very wide door to all manner of claims being set up, of which some notion may be gathered from a perusal of compensation cases; and their name is legion, which appear in the English Law Reports. When owners fancy that their private rights are invaded or are unlawfully affected, they are seldom moderate in their demands. I have no reason to believe that the Indian claimant will be entirely free from this failing, which may not improperly be regarded as one of those touches of nature which make the whole world kin.

"The learned Advocate-General has suggested one way out of the difficulty. I venture to suggest another, which I think is likely, at least in my humble judgment, to meet the justice of the case. And what I propose is, that the last part of the section should run thus: 'shall entitle the owner thereof to sue for compensation for any depreciation in the value of such works in any case in which he would have been entitled to sue for and recover, &c.'

"This will have the effect of laying down a sufficiently definite rule, instead of the somewhat vague and indefinite measure of compensation allowed by the Hon'ble Sir Henry Harrison's amendment. It may be said that, we accepted that indefinite standard of compensation when we passed, on the last occasion, the amendment made to section 85. But, as has been already pointed out, the two cases are not precisely the same, nor are they even similar, and I think there can be no harm in laying down a different measure of compensation in cases in which you are only prohibited from putting your property to a particular use, from that which is applicable to cases in which the whole structure is absolutely destroyed.

"My objection, therefore, as I have already said, is not to the principle of the amendment, but only to the measure and extent of compensation to be conceded."

The Hon'ble SIR HENRY HARRISON said in reply:—"I have no wish to underrate the objections raised by the Hon'ble Sir Charles Paul and the Hon'ble Mr. Allen, but those objections are indefinitely weakened by the consideration that they do not, as the Hon'ble Dr. Rash Behary Ghose does, suggest any alternative course. Therefore, they must clearly be understood as willing to pass section 96 in its present form, and, if so, no objection raised by them can, for a moment, bear comparison with the weight of the objection to letting that section stand unamended. As the Hon'ble Mr. Nolan stated correctly at the last meeting, the section corresponding to section 85 in the old Act has never been used; whereas the section corresponding to section 96 has been used on many occasions in a manner which I and the Port Commissioners are quite prepared to admit has been harsh, if not more than harsh. Whenever the Commissioners have wished to get rid of a private wharf or jetty, what they have done is, not to remove or destroy it, but to open a wharf or jetty of their own in the neighbourhood; and then to say that the private wharf or jetty shall no longer be used.

"Therefore, it comes to this that, we have spent weeks of preparation and hours of discussion in altering the earlier section, which is practically of little importance, and then when we come to the section which is the real *fonc et affigo mali*, the retention of which would make the earlier amendment absolutely useless, we are to fold our hands and say *non possumus*. I must, speaking for myself, say that this would be playing with the remonstrances of the Chamber of Commerce. I do not think that, on careful reflection, the objections would prove nearly so strong as the Hon'ble Sir Charles Paul and the Hon'ble Mr. Allen represent, and I am not at all prepared to abandon the principle of my amendment; but still it is desirable, in the light of this day's discussion, to examine its wording carefully and see if it can be safeguarded.

"The Hon'ble Mr. Moore authorises me to say that he does not press for compensation for prospective tolls, and, if so, all those who accept the principle are substantially in accord. I therefore suggest that, instead of coming to any immediate vote, which will leave no option except to leave the section unaltered, or to accept the amendment *verbatim* as it stands, section 96 may be referred back to the Select Committee for further consideration."

HIS HONOUR THE PRESIDENT said:—"Before putting either question to the vote, I think it is worth while just to sum up to a certain extent what seems to me to be the various views now before the Council. In the first place, the hon'ble member in charge of the Bill, who is also a member of the Port Commission, considers that section 96, as it stands, is not sufficient without some provision, for giving compensation on the same lines as that which is urged vehemently by the Chamber of Commerce and by the hon'ble member who, in this Council, represents their interests. Consequently, you have the member in charge of the Bill and the Port Commissioners' interests and the interests of the Chamber of Commerce, all at one upon this point.

"Then, when you come to debate the question, it seems to me at least—and I should have said so, until the Hon'ble the Advocate-General made his last remark—that there was a general consensus of opinion that something in the shape of compensation was necessary, or at all events was equitable. It might be, as I understood the Hon'ble the Advocate-General to say, merely paying compensation for the actual value of material wasted, or for the actual value of the jetty, or of the erection. There are others who think there are some larger claims; but I am bound to say that the concurrence of legal opinion is so strong

against the clause as proposed by my hon'ble friend to the left that, if that clause had to be put before the Council, I should have found myself obliged to vote against it.

"But there seems to me to be a consensus of opinion that something in the nature of compensation ought to be given, and it is also agreed that it should exclude any compensation for the future payment of fees which owners have not had to pay in the past, owing to the fact that they have been able to use their own jetties. Well, that brings us to a certain point in coming to an understanding: it clears the ground to some extent.

"The Hon'ble Dr. Rash Behary Ghose has been good enough to offer a suggestion which he thinks might meet the case; but that, unfortunately, has come at the end of the debate, and it does not seem to me that there is any opportunity now of taking the opinion of the Council on a question of that kind, without a little further consideration.

"I do not quite like the idea of referring a single section back to the Select Committee; because, if you refer this section back to the Select Committee, I do not see how you can exclude section 94, and that opens up rather a large field. I think I should prefer myself, instead of referring it back to the Select Committee, to adjourn the Council for one week for the consideration of the clause as suggested by the Hon'ble Dr. Rash Behary Ghose. That could be brought forward next week, or, possibly, some adaptation of it might be likely to meet the wishes of both parties. But if there is no better method—if I find nothing like an agreement is possible—I will adopt the view of the hon'ble the mover of the Bill, namely, to refer the Bill back to the Select Committee. It seems clear that you cannot pass the Bill to-day with this difference of opinion about it."

The further consideration of the section was postponed till the next sitting of the Council.

The Council adjourned to Saturday, the 1st March, 1890.

C. H. REILY,

CALCUTTA;
The 27th February, 1890. }

Assistant Secretary to the Govt. of Bengal,
Legislative Department.

DISTRICT ROAD FUND.

GOVERNMENT OF BENGAL—PUBLIC WORKS DEPARTMENT.

No. 884R.C.

Calcutta, the 26th February 1890.

READ—

Letter from the Accountant-General, Bengal, No. 599L.F., dated the 6th February 1890, submitting an abstract of the receipts and expenditure of the several District Road Committees in Bengal for the quarter ending 30th September 1889.

RESOLUTION.—The Lieutenant-Governor directs that the accounts of the receipts and expenditure of the several District Road Committees for the second quarter of the year 1889-90 be published in the *Calcutta Gazette*, and circulated to the officers concerned.

ORDER.—Ordered that a copy of this Resolution, together with a copy of the abstract of receipts and expenditure, be published in the Supplement to the *Calcutta Gazette*.

Ordered also that a copy of this Resolution, and of the abstract referred to, be forwarded to the Commissioners of the Rajshahye, Bhagulpore, Chittagong, and Chota Nagpore Divisions; to the Superintending Engineers of the Eastern and Western Circles; and to the Financial Department of this Government, for information.

By order of the Lieutenant-Governor of Bengal,

W. B. BESTIC,

Under-Secy. to the Govt. of Bengal,
P. W. Dept.

DISTRICT

Statement of Receipts and Expenditure of the several District Road

RECI

DISTRICTS.	Balance in treasury on 1st July 1889	PROVINCIAL RATES.					Int-rest on advance of road con.	PUBLIC WORKS.			IRRIGATION.	MISCELLANEOUS.	
		Cess on lands.	Cess on mines.	One per cent road con.	Cess on houses.	Total.		Road tolls.	Ferry tolls.	Total.		Rent of acres and staging-bungalows.	Fines, fees and forfeitures.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.
Case Districts.													
Darjeeling	8,450 10 4	1,809 7 1	31 7 5	.....	.....	1,840 14 6	.....	.....	.....	.....	.....	81 4 0	200 3 0
Hazaribagh	25,000 11 3	1,740 8 11	11 5 6	.....	.....	1,751 10 5	80 10 5	.....	.....	.....	.....	27 8 0	212 1 0
Lehargah	22,640 4 8	637 3 11	.....	.....	.....	637 3 11	30 8 5	.....	.....	.....	.....	670 10 5	.....
Manbhum	19,984 12 10	2,954 4 11	555 10 1	.....	.....	3,509 15 0	103 3 9	.....	.....	.....	.....	.....	.....
Total	77,752 6 6	7,051 8 10	598 6 0	.....	.....	7,649 11 10	204 3 5	.....	.....	.....	.....	485 10 5	812 1 0
Non Case Districts.													
Chittagong Hill Tracts	7,479 3 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	92 6 0	.....
Central Pergunnahs	47,78 1 0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 0 0	.....
Singbhum	15,996 1 9	.....	12 1 0	.....	.....	12 1 0	.....	.....	.....	.....	.....	.....	.....
Total	70,763 6 2	.....	12 1 0	.....	.....	12 1 0	.....	.....	.....	.....	.....	98 6 0	.....
GRAND TOTAL	1,48,455 12 8	7,061 8 10	610 6 0	.....	.....	7,661 12 10	204 3 5	.....	.....	.....	.....	783 16 5	812 1 0

EXPENDITURE

DISTRICTS.	RECEIPTS.			PROVINCIAL RATES.		ADMINISTRATION.		STATIONERY.		PUBLIC WORKS.		IRRIGATION.		MISCELLANEOUS.	
	Cash.	Other receipts.	Total.	Establishment and con- sistence of office of collection.	Establishment and con- sistence of Committee's office.	Percentage cost of ex- penditure for office of account and control.	Total.	Stationery and printing.	Original works.	Repairs.	Establi- ment.	Trails and plant.	Total.	Total.	Total.
	Rs.	Rs.	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Case Districts.															
Darjeeling	.....	.....	.....	305 9 1	345 15 4	.....	305 13 6	.....	305 11 0	703 6 1	1,251 18 0	.....	1,251 18 0	.....	.....
Hazaribagh	.....	.....	.....	1,002 15 4	374 9 4	.....	374 15 4	200 1 7	200 1 7	200 1 7	2,013 8 0	1,294 14 9	2,013 8 0	1,294 14 9	.....
Lehargah	.....	.....	.....	2,007 0 2	207 1 1	.....	2,007 1 1	200 4 0	200 4 0	200 4 0	2,000 2 10	20 4 0	2,000 2 10	20 4 0	.....
Manbhum	7 6 0	.....	7 6 0	404 12 6	601 17 6	.....	601 11 6	10 3 9	1,500 12 6	11,025 10 7	2,123 6 8	303 4 0	2,123 6 8	303 4 0	.....
Total	7 6 0	.....	7 6 0	4,018 3 5	1,409 2 5	.....	1,409 2 5	400 0 10	2,451 14 0	33,032 10 5	3,896 14 0	2,123 6 8	3,896 14 0	2,123 6 8	.....
Non Case Districts.															
Chittagong Hill Tracts	.....	.....	.....	.....	860 7 0	.....	860 7 0	.....	1,070 13 2	441 0 0	1,196 8 0	.....	1,196 8 0	.....	.....
Central Pergunnahs	.....	.....	.....	.....	170 3 9	.....	170 3 9	20 10 0	20 10 0	20 10 0	2,120 9 3	100 0 5	2,120 9 3	100 0 5	.....
Singbhum	.....	.....	.....	.....	.....	.....	.....	.....	505 7 5	2,701 7 9	2,701 7 9	64 0 0	2,701 7 9	64 0 0	.....
Total	.....	.....	.....	.....	830 10 9	.....	830 10 9	20 10 0	1,097 4 6	14,107 5 3	4,979 3 3	100 0 5	4,979 3 3	100 0 5	.....
GRAND TOTAL	7 6 0	.....	7 6 0	6,091 3 8	1,920 13 2	.....	1,920 13 2	619 8 10	4,119 2 6	47,800 4 0	12,007 1 0	2,123 6 8	47,800 4 0	12,007 1 0	2,123 6 8

FORT WILLIAM,

The 23rd January 1890.

ROAD FUND.

Committees for the Second Quarter of the Year 1889-90, ending 30th September 1889.

M.TS.

No.	Particulars.	Total.	Grant from Government.	SUSPENSE ACCOUNT.			Total receipts.	Balance of imprest in hands of Engineers and others, decreased.	Balance of unencashed cheques, increased.	Total receipts, including balance.	Outlay.	Balance in Treasury on 30th September 1889.
				Advance.	Deposit.	Total.						
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
67 7 8	67 7 8	177 4 0	685 0 0	.....	618 0 0	2,740 10 0	.....	820 8 2	9,730 12 6	4,837 11 8	4,891 0 10	.....
2 3 0	683 10 9	518 0 2	2,416 7 8	.....	2,414 7 8	2,445 6 6	.....	.....	24,412 1 8	21,784 8 4	12,620 9 3	.....
9 11 9	250 1 9	450 0 0	444 8 10	700 0 0	1,300 8 10	2,304 16 11	.....	90 18 1	25,107 2 3	17,619 10 7	7,3 5 7 7	.....
18 8 11	500 7 2	230 0 0	300 1 5	150 0 0	510 1 5	4,935 11 4	5 6 6	.....	24,706 13 8	17,978 9 7	6,816 4 1	.....
33 15 2	1,301 10 5	1,904 6 2	3,905 12 11	518 0 0	4,820 12 11	18,816 10 9	5 8 5	819 7 3	91,036 14 0	62,647 6 4	21,597 5 4	.....
10 9 0	191 10 0	.....	1,000 0 0	.....	1,000 0 0	1,000 0 0	.....	.....	8,479 3 1	3,391 8 8	4,887 13 9	.....
.....	5 5 5	.....	1,253 16 8	50 0 0	1,323 16 8	1,521 11 0	540 6 6	128 10 0	39,721 12 4	16,575 13 0	23,145 15 6	.....
.....	.....	.....	485 0 0	.....	485 0 0	805 1 0	.....	.....	16,302 3 8	5,002 5 7	11,639 12 3	.....
10 9 0	197 18 0	.....	2,770 14 0	50 0 0	2,820 14 0	3,330 17 0	540 6 6	128 10 0	74,433 2 8	25,679 8 3	48,753 10 5	.....
10 9 2	1,700 7 8	1,300 4 2	0,076 10 11	500 0 0	7,641 10 11	18,867 6 9	805 1 0	718 1 3	1,68,131 0 8	89,127 0 7	89,211 0 1	.....

M.TS.

No.	Particulars.	Total.	Irrigation.	MISCELLANEOUS.					SUSPENSE ACCOUNT.	Total expenditure.	Balance of imprest in hands of Engineers and others, increased.	Balance of unencashed cheques, decreased.	Total outlay.
				Canal toll establishment and contingencies.	Staging, bungalows, establishment and contingencies.	Staging, bungalows, construction and repairs.	Miscellaneous.	Total.	Advance.	Deposits.	Total.		
Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.
1,314 10 1	27 0 0	1 1 0	.....	20 1 0	.....	1,719 7 0	.....	1,719 7 0	4,837 11 8	.....	4,891 0 10	.....
16,633 9 7	24 8 0	23 12 4	30 6 0	100 14 4	.....	2,610 3 3	.....	2,610 3 3	21,617 5 7	.....	21,784 8 4	.....
12,436 10 9	43 17 8	170 9 10	.....	380 8 7	.....	852 0 0	1,245 0 0	2,097 0 0	17,968 10 7	.....	17,978 9 7	.....
15,799 0 9	415 0 0	400 0 0	805 0 0	17,978 9 7	.....	.....	.....
47,040 2 8	125 4 0	301 7 8	30 0 0	465 1 11	.....	5,000 10 5	1,005 0 0	7,181 10 5	62,859 8 5	.....	100 2 11	62,647 6 4
2,600 8 8
12,350 7 0	118 1 0	.....	1,000 0 0	1,118 1 0	.....	2,705 14 0	737 0 3	2,700 14 0	16,525 13 0	.....	135 0 0	2,891 5 8
4,784 0 7	80 10 2	.....	55 18 0	130 7 3	.....	.....	.....	.....	5,502 8 7	.....	.....	16,575 13 0
30,870 13 8	100 11 3	.....	1,000 13 0	1,207 5 3	.....	2,700 14 0	737 0 0	3,443 14 0	28,334 8 3	.....	135 0 0	28,679 8 3
67,313 15 11	304 0 0	301 7 8	1,007 3 0	1,719 10 2	.....	8,198 8 5	2,400 0 0	10,698 8 5	87,908 13 8	.....	320 2 11	88,127 0 7

E. T. ATKINSON,

Accountant-General, Bengal.

**RESOLUTION ON THE REPORT ON THE ADMINISTRATION OF THE
OPIUM DEPARTMENT DURING THE YEAR 1888-89.**

REVENUE DEPARTMENT—MIS. REVENUE.

Calcutta, the 2nd February, 1890.

RESOLUTION.

READ—

Report on the administration of the Opium Department during the year 1888-89.

The Board's annual account of the administration of the Opium Department formerly included little beyond observations on the several reports submitted by the two Opium Agents. In 1877-78 it took a more comprehensive form, the results of the operations generally being brought together; and this year a further improvement has been effected by combining also the maps by which the reports are accompanied. In order to render the review complete, it remains only to add an account of the Board's own action during the year in the direction of inspection or control, and of the facts specially within their knowledge, such as the result of sales and the condition of stocks. This information should be given in future, unless some special objection can be indicated to so doing. The Government of India has already directed that the future reports shall include a review of expenditure.

2. Owing to the bumper crops of the years immediately preceding, and the consequent accumulation of a large stock, it was necessary to issue orders for the restriction of cultivation during the year 1888-89, so as to yield a comparatively small outturn. The character of the season itself contributed to produce the desired result. In both Agencies it opened well, and strict compliance with the orders of Government as to limiting production may at first have appeared a somewhat difficult task. But the heavy showers and the hailstorms of February swamped the tender plants, while damp and cloudy weather materially checked their growth, and the high temperature and strong winds which prevailed most inopportunely in the early part of the month of March, immediately after the collection of the juice had commenced, scorched and very injuriously affected the secreting powers of the capsules. In consequence, there was a serious falling off in the average produce per bigha, amounting in the case of Behar to as much as 2 seers $3\frac{1}{2}$ chittacks, and in that of Benares to 1 seer 13 chittacks. At the same time the settlements were carefully restricted, the action taken with this object by the Benares Agent in particular being systematic and well-considered. The area engaged for in the two Agencies was 139,641 bighas short of that of the preceding year, and the eventual result of this curtailment, taken with the diminished yield per acre, was the manufacture of only 38,305 chests of opium for export by sea, as against 69,500 chests during 1887-88. There was an increase in the cost per chest, but this was to be expected from a short outturn, which necessarily leads to a higher average. Several advantages accruing to the change in policy involved in the issue of orders limiting production are apparent, and not the least is the opportunity it has afforded for redistributing the establishments employed in abandoned tracts, and so strengthening in other and more profitable quarters a staff which was sanctioned years ago, and has had to bear the strain caused by a hitherto steady increase in the extent of operations. The reduction has also rendered possible other improvements, and it is observed with satisfaction that an attempt has been made in the Benares Agency to render more thorough and effective the supervision of cultivation by requiring that each license shall contain the khasra number of the land to which it relates; while in Behar the system of granting a separate license to each cultivator and taking from him a separate receipt has been introduced successfully, and is said to maintain the influence of the khattadar without sacrificing the individual responsibility of the ryot. Another probable result of the exercise of discrimination in the selection both of land and of cultivators, is a distinct advance in the quality of the drug. At Ghazipore the opium produced was unusually free from pusseswah and other impurities, and of exceptionally high consistence; so much so that, for the first time on record, the

season's deliveries were so high that none could be manufactured at the Agency standard of 70 per cent.; while the quality and consistence in the case of Behar are declared to have been too high, and to have necessitated an inconvenient increase in the caking consistence of over 300,000 cakes.

3. The evidence adduced in this year's report of the popularity of the system under which opium is cultivated is both striking and valuable. Mr. Tytler, though he took special measures to prevent land being sown in excess of engagements, had to measure and admit 1,500 bighas more than he had given advances for. Mr. Rivett-Carnac, in his able report, observes in regard to the Benares Agency—

"As settlements progressed, numerous appeals came in from all sides of the Agency against the policy of reduction that was being carried out: men found their way from distant parts of the provinces to Ghazipur and submitted their petitions in person to the Agent, and it was evident that the cultivation had taken a strong hold on the people, as even small reductions were strongly objected to. It must here be remarked that the poppy cultivation seems at the present time to be most popular in Oudh, though it is no exaggeration to describe it as such, with rare exceptions, all over the North-West Provinces. From the Agent's orders petitions were submitted to the Board, and then on to Government, whilst some cultivators went even so far as to petition Her Majesty the Queen-Empress against the reduction of cultivation in the districts."

4. In the Benares Agency only 5,349 bighas were unirrigated out of a total cultivation of 329,918; and in Behar, notwithstanding the feeling against the Sone canal water, the existence of which is still noticed, there was a considerable advance in this respect, and 325,130 out of 405,866 bighas were under irrigation last season. The sums advanced in the latter Agency during the year for the construction and repair of wells were largely in excess of those of 1887-88, but in Benares there was a falling off to the extent of Rs. 9,319-15-7. Mr. Rivett-Carnac has explained that this was another effect of the concentration and confinement of the cultivation to tracts where the poppy has always flourished, and where there is in consequence less need for help from the Department in any form.

5. Owing to the poor outturn and the extensive failures of the year, the outstanding balances were heavy and their incidence almost universal. The considerate policy inculcated by Government in connection with the recovery of these was duly observed, but, nevertheless, the realizations in Behar were complete, except in the solitary district of Monghyr, with reference to which a special enquiry is clearly called for, as it did not fall within the area affected during the recent distress. In the Benares Agency it is sufficiently satisfactory in all the circumstances that out of a balance of Rs. 11,65,493-14-3 the amount that now remains unadjusted is Rs. 4,945-7-6 only.

6. As regards breaches of the opium laws, there was an insignificant increase in the number of cases instituted, and the percentage of convictions was unusually high for both Agencies. The rule requiring Opium Officers to be consulted prior to the institution of such prosecutions is again favourably reported upon. The rewards disbursed to informers and apprehenders amounted in Bengal to Rs. 12,978-12-6, and in the North-Western Provinces and Oudh to Rs. 5,302-9-1, as against Rs. 10,607-4-7 and Rs. 5,243-7-1 respectively paid during 1887-88. No heavy smuggling cases were reported, but a few comparatively important seizures were made. The Benares Agent considers that there is good reason to suspect that an organization exists for the smuggling of opium on a large scale into the Punjab, either from Nepal or from British territories, and he is in communication with the Financial Commissioner of that province on the subject. The Behar Agent, on the other hand, inclines to believe that the traffic with Nepal is exaggerated, and he remarks that nearly every large lot of illicit opium detected is said to have come from that quarter, an assertion easily made, not readily disproved, and too eagerly accepted by Opium officials, who naturally are unwilling to allow that the contraband article in any quantity can be collected from the cultivators licensed and supervised by them. The subject is one which requires special attention. As to the existence of extensive smuggling from Nepal, there can be no doubt, many uncleared cases having been actually detected, one of which occurred this year in the Benares Agency. But it may very well be that, as suspected by Mr. Kemble, the results of illicit transactions by the opium cultivators themselves are often attributed to foreign agency.

7. The thanks of the Lieutenant-Governor are due to the Board and both Agents for their careful supervision of the Department during the period under review. The Lieutenant-Governor also notices with pleasure the favourable mention made by the Board of the services of the following officers.

Sub-Deputy Opium Agents.

Messrs. W. Masters, R. Drake, A. G. Tytler, W. D. Ridsdale, A. F. Mackenzie, C. Paterson and A. C. Bryson.

Assistant Sub-Deputy Opium Agents.

Messrs. J. E. Hand, G. M. Gregory, H. Blair, A. W. Osborne, W. T. Ryves, C. A. C. Gennoe, G. Nicholson, A. B. Kennedy, G. Lovett Yeats, H. D'Oyly, and Baboo Jugadish Chandra Ray.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Government of Bengal.

EXCISE ADMINISTRATION.

RESOLUTION.

ORDERED that the following selection from papers relating to Excise Administration be published for general information in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

H. J. S. COTTON,

Offg Secy. to the Govt. of Bengal.

No. 55, dated 19th February 1889.

From—The Government of India,

To—The Secretary of State for India.

In our Despatch No. 213, dated 11th August 1888, we undertook to furnish Your Lordship with information regarding the nature of the outstill systems as administered in the several Provinces of India and the extent to which they are in operation in each case. This information was called for from Local Governments, and has now been received. We propose in the following paragraphs to summarize its substance, supplementing it where necessary from the Excise administration reports.

2. In the Madras Presidency there are certain scattered tracts in which the distillation of spirit from toddy is a process both simple and inexpensive. Illicit distillation in these tracts can only be suppressed either by the employment of a very large preventive service or by the establishment of a system of outstills. To the first of these measures there are obvious objections, and, under the conditions that exist, it could not be made effective. The second has therefore been adopted, but precautions are taken to prevent excess in production and consumption. The strength of the liquor issued is prescribed; the minimum retail price of it is fixed; while the stills and places of sale are as few as the conditions of the case permit. The system, so guarded, is in force over a gross area of 17,324 square miles, or less than one-eighth part of the whole Presidency.

3. Although the area under the outstill system is small in Madras, it is even smaller in Bombay. Central distilleries supply the whole Presidency, with the exception of three isolated tracts covering a gross area of about 7,500 square miles. In these a limited and guarded system of outstills is maintained, partly on account of the rugged nature of the country and the migratory habits of a scattered population, partly on account of the facilities for illegal domestic distillation from toddy and mowha flowers, and partly because of the ease with which cheap liquor can be smuggled in from neighbouring Native States. British and Native territory is much interlaced in this Province, and from this cause serious difficulties were formerly experienced in excise administration. To a great extent these difficulties have now been overcome by arrangements under which the excise administration of the States concerned is controlled by the Bombay Government. These arrangements have made it possible to maintain the central distillery system in what is practically universal use. Even in Sind, which up to 1887 was managed on a system of farming, the central distillery plan has now been adopted throughout.

4. In the Punjab, which adjoins Sind, there is practically no outstill system at all. Outstills are allowed in two tahsils of the mountainous district of Kangra; but their capacity is regulated, and in 1887-88 their whole outturn was less than 8,000 gallons, which is equivalent to a consumption of one bottle of proof spirit per head in fourteen years in the first tahsil, and in twenty-nine

years in the second. In all other parts of the Province the central distillery system is in force.

5. In Lower Burma the consumption of spirit made after Native methods is very small, and only yielded a revenue of R1,16,483 in 1887-88. This small consumption is distributed over a very large area; 49 stills, scattered over districts so distant as Arakan, Pegu, and Tennaasserim, participate in the production. The difficulties of transport are so great and the physical features of the country so unfavourable to the maintenance of a direct supervision over manufacture that it does not seem probable that production can be successfully concentrated. The District Officers have unanimously reported that it cannot, though it will be observed that the Financial Commissioner is disposed to recommend that the experiment should be tried. The outstill licenses, which convey the right to manufacture and sell country spirits, are sold by auction annually. The District Officer fixes the number of days a week, or a month, on which the still may be worked. The spirit is made from either cane or toddy sugar.

6. In the North-Western Provinces and Oudh a considerable area, namely, 36,824 square miles, with a population of nine millions out of a total area of 106,111 square miles and a population of forty-four millions for the Province, is administered under the farming or outstill system. "Farming" is merely an expanded outstill system. In the tracts where it has been introduced, the licensee secures the right of making and selling liquor within the limits of the "farmed" area, including control over a large number of outstills and a monopoly of the liquor traffic. Under both systems the Government prescribes the number of stills and shops and has laid down rules which require the limitation of the capacity of the stills. It seems, however, that this last condition has not been enforced. As we have not yet received the report of the Local Government, we are not aware of what view they take of the omission, or of the question whether the outstill area might not be further restricted and the conditions of the licenses made more severe. It appears from the letter from the Board of Revenue, forwarded by that Government, that reform in this direction is likely to be undertaken, and if we do not receive satisfactory explanations we shall take care that the matter is not lost sight of. The revenue derived from the outstill system in 1887-88 is stated at about R6,00,000 or less than one-sixth of the total revenue from excise on country spirits in these Provinces.

7. In the Provinces referred to in the preceding paragraphs, resort has been had to the outstill system either to only a comparatively small extent, or under exceptional circumstances. It is, however, the prevailing system in Bengal, the Central Provinces, Assam, and the Hyderabad Assigned Districts. In all these Provinces the number of shops is regulated by the Government, and in Bengal, the Central Provinces and part of Assam, further restrictions, to which we shall presently refer, are imposed with a view to limit production.

8. In Bengal the outstill license permits the manufacture and sale of country spirit, the produce of a single still, at a fixed place. No separate duty is charged, but an upset fee is fixed which is calculated on the approximately ascertained local demand or consumption of the shop, multiplied by half the rate of duty fixed for country spirit for the district. The license is put up to auction and sold to the highest bidder above the upset fee. The size and capacity of the still, and the number and capacity of vats in which the yeast for distillation is prepared, are regulated by the local demand on which the upset fee has been calculated. No outstill is allowed within a certain distance outside the area appropriated to a central distillery. In districts where the dual system, distillery and outstill, is in force, a minimum retail price per bottle of liquor, both for distillery and outstill shops, has been fixed. Precautions are taken to prevent as much as possible the smuggling of outstill liquor into distillery areas. The facilities for this smuggling are so great and various, and the means of detection so small, that the only hope of effectually stopping it is by forcing the price of outstill liquor, at all events in the neighbourhood of distilleries, to the level of that of distillery liquor. Measures to secure this are being gradually introduced, the cost of production in outstills has been increased by strictly limiting the capacities of the stills, and by insisting on the payment of license fees proportioned to their possible outturn as ascertained on the most approved methods. The outstill revenue was R31,91,334 out of a total revenue from

country spirits in 1887-88 of Rs52,05,122, or 61 per cent. There were 3,535 outstill shops out of a total number of 4,105 retail places of sale.

9. The consumption of the greater portion of the Central Provinces is supplied from contract stills or outstills. Contract stills are built and maintained by Government, and can only be worked at places where daily supervision by Government officials or by the Police can be secured. Control is secured by taking a daily fee for each still in use (roughly proportioned to the number of *sers* of mowha with which the still can be charged) and by seeing that only those boilers are used in respect of which the day's fee has been paid. The taxation of production at these stills is thus completely regulated, and the system does not differ in principle from that of centralised manufacture. They are said to be more easy and less expensive to manage than central distilleries. At outstills, there are no restrictions upon the manufacture other than those imposed by the limitation of the number of licensed shops to be supplied, and of the size of the vessel used in distillation. Outstills supply the demand of rural tracts and are erected by the distillers at their own expense on sanctioned sites, and receive only occasional inspection. In 1887-88 there were 118 contract stills and 1,683 outstills supplying an area of 44,000 square miles, and the outstill revenue was Rs3,96,375 out of a total revenue from taxation of country spirit of Rs13,90,631, or 28 per cent. The physical nature of the outlying districts of the Central Provinces and the great length of the frontier which marches with Native territory render the extensive adoption of the outstill system inevitable.

10. In Assam also, the control is less severe than in Bengal, and the maintenance of the system as administered is only justifiable as a consequence of the physical character of the country, the great facilities for illicit production, the difficulties of transport, the size of the districts, and their sparse population. The sites of the shops are settled by the District Officer subject to the approval of the Commissioner, and the right of preparing and selling country spirits at them is sold annually by auction. One still is allowed to each shop; but where a purchaser is the licensee of more than one shop, he may work in one shop as many stills as he has shops. The capacity of the stills, and the hours within which they may be worked, are defined in the license. We propose to invite the Chief Commissioner's attention to the desirability of attempting to introduce some of the further safeguards insisted on in Bengal and Madras.

11. In the Hyderabad Assigned Districts the farming system is in force. It is described in the Administration Report in the following terms:—

"The system of administration in the Hyderabad Assigned Districts of the excise revenue is what is called the farming system, whereby the monopoly of vend within a given area is put up to auction and is disposed of to the highest bidder. The number of retail shops for country spirits is limited to what is considered the requirements of the people, and the contractors are on no account allowed, without the special sanction of the Deputy Commissioner, to increase the number. The object of this restriction is to obtain the highest amount of revenue distributed among the smallest number of places of vend, or, in other words, to heighten the price of liquor, as far as possible, without increasing facilities for obtaining it. The population per retail liquor-shop is 1,109. The only spirit manufactured in Berar is that distilled from mowha, and mowha trees abound in the province."

12. Your Lordship will observe that, except in Bengal and Berar, the conditions which the several Local Governments consider necessary to justify the introduction of the outstill system into any locality are, sparseness of population, difficulty of transport, want of proper means of communication, and physical features unfavourable to the working of a centralised system. There is no room for doubt that in localities where these conditions exist the outstill system is the most suitable yet devised for taxing consumption. The question whether it can be satisfactorily worked under the conditions which prevail in a large portion of Bengal, is one which is at present engaging the anxious attention of the Local Government, and Your Lordship will find, in the enclosures to our Despatch No. 22, dated 22nd January, valuable information regarding excise administration in that Province. The Bengal Excise Commission of 1884 advised that the regulation of outstills was quite possible under safeguards intelligently devised and energetically applied. It is obvious that there is not necessarily any difference of principle between the system which taxes consumption by a duty on the quantity of liquor passed out of a guarded enclosure and that

which adjusts the duty to the producing capacity of a still without placing the latter under constant and direct supervision. If it is possible in practice either to enforce a limitation of production and impose duty accordingly, or to adjust the duty to the full producing capacity of the still, there can be no advantage in superseding outstills by central distilleries. Under such conditions every gallon of spirit would pay full duty, liquor could not be unduly cheapened at the cost of the revenue, and obviously the cause of temperance could not suffer. If again the restrictions on consumption be alone regarded, the device of fixing a minimum price on the sale of all outstill-made liquor will be effective if it can be enforced. There was some hesitation at first in Bengal in accepting this device as a possible solution. The experiment was, however, made in those districts where the dual system of central distilleries and outstills exists, mainly with the view of checking competition between distillery and outstill liquor. So far as information has been received, there is reason to be satisfied with the result, and it is understood that the Bengal Government contemplate fixing minimum prices in all districts. The same condition is enforced by the Government of Bombay in the case of the outstills in the Ratnagiri and North Kanara Districts. The Excise system in Bengal must, however, be still considered as in an experimental stage, and we have, as reported in our Despatch No. 23 of the 22nd January, requested the opinion of the Lieutenant-Governor on the question whether, instead of being given a more extended trial, the outstill system should be generally abolished.

13. In considering the propriety of superseding the outstill system in Bengal, it is necessary to recollect that the only immediate alternative is the sudder distillery of Northern India, which is simply a guarded enclosure containing a number of native stills. There are, however, difficulties in the way of the general introduction of sudder distilleries unless extensive changes in the ordinary processes of manufacture are introduced. The spirit made in the native method is far from pure and, when manufactured from the flower of the mowha tree (*bassia latifolia*), which is the chief material used in Bengal, the Central Provinces, and the North Western Provinces and Oudh, will not bear transport, and rapidly deteriorates. Such spirit must, therefore, be manufactured near the place where it is consumed, and this necessitates the maintenance of a large number of distilleries in districts where the sudder distillery system is in force; for instance, in the Central Provinces, it is calculated that one of these distilleries supplies only the country within ten or twelve miles. It should, however, be borne in mind that in Madras and Bombay the introduction of European apparatus and methods has resulted in the production of country spirit of a class which will endure transport over long distances, and which does not deteriorate when kept. Moreover, the preventive establishments in those Provinces are efficient, and it has consequently been found possible to concentrate the manufacture, with the result that the number of central distilleries is in striking contrast with the number in Northern India. Thus in Bengal, the number of central distilleries in 1869 was 257, and in 1878, the year preceding the revival of the outstill system, 211; in the Punjab there are at present 65; while in Madras, in 1887-88, two-thirds of the whole Province was supplied from only 19. The difficulties attending the establishment of an effective preventive agency are perhaps not likely to be as successfully overcome in Bengal as they appear to have been in the two Southern Presidencies. But it should certainly be kept in view that the only satisfactory solution of the difficulties attending the central distillery system, if the decision to suppress outstills is taken, seems to lie in the adoption of either the Madras or Bombay method, and in the introduction of a radical change into the customary processes of local manufacture. The Bengal Excise Commission, however, advised in 1884 against the adoption of European methods of production in Bengal, and their views receive some confirmation from the fact that one of the two distilleries established on this footing has been closed, and that the trade is languishing. But looking to the satisfactory results achieved elsewhere, it seems to us that the question is deserving of further consideration, which it will doubtless receive at the hands of the Bengal Government in connection with the report submitted by Mr. Buckland on the Bombay and Madras systems, a copy of which was forwarded to Your Lordship with our Despatch No. 22, dated 22nd January last.

14. The table in the margin, which shows the fluctuation of excise revenue

YEAR.	COUNTRY SPIRITS.			REMARKS.
	Distillery revenue.	Outstill revenue.	Total revenue.	
1	2	3	4	5
	R	R	R	
1860-61	8,78,000	9,74,882	18,52,942	
1861-62	8,12,624	10,57,925	18,70,549	
1862-63	7,34,188	10,24,045	17,58,233	
1863-64	8,26,118	11,29,429	19,55,547	
1864-65	14,67,944	3,05,830	17,73,274	Orders for suppression of outstills "made peremptory."
1865-66	12,36,286	1,92,220	14,38,506	
1866-67	7,85,785	35,865	8,21,650	
1867-68	12,37,657	27,453	12,65,010	
1868-69	16,11,292	34,055	16,45,347	
1869-70	16,28,267	35,047	16,63,314	
1870-71	18,07,450	39,878	18,47,328	Outstill system again introduced.
1871-72	18,11,273	1,23,892	19,35,165	
1872-73	18,80,279	2,34,980	21,21,268	
1873-74	20,02,878	2,42,366	22,35,243	
1874-75	20,36,335	1,91,727	22,28,062	
1875-76	22,41,591	2,68,473	25,10,064	
1876-77	23,30,773	2,94,026	26,25,399	
1877-78	25,41,621	3,49,439	28,90,460	
1878-79	16,97,085	12,73,826	29,70,911	Board of Revenue withdrew the orders limiting the capacity of outstills.
1879-80	13,75,032	18,13,759	31,88,851	
1880-81	11,81,717	30,39,582	42,21,299	
1881-82	12,60,144	38,80,051	51,40,195	
1882-83	13,48,214	34,78,084	48,26,298	
1883-84	13,74,765	38,47,976	52,22,731	
1884-85	13,88,520	34,05,691	48,55,211	Excise Commission recommended central distilleries for urban tracts, and more severe restrictions over outstills.
1885-86	15,33,773	29,76,455	45,10,228	
1886-87	18,29,220	29,62,020	47,91,240	

* The entries against the year 1866-67 represent figures for 11 months from May to 31st March, as the year was then changed from May to April. The year was also a famine year.

in Bengal under the outstill and distillery systems, is very significant of the effects of the hasty and ill-considered introduction of the centralised system, regardless of local conditions. The orders for the general suppression of outstills in Bengal were made peremptory in 1863. The immediate result was a large loss of revenue, which did not regain even the standard of 1863-64 until 1871-72, and then only after it had been again found necessary to resort to outstills. The habits of the people did not undergo any violent change during this period, and the only possible inference from the great fluctuations in the revenue is that the adoption of the centralised system, under conditions to which it was unsuited, led both to a great loss of public income and to a great increase in illicit drinking. Other provinces have undergone the same experiences. A striking illustration of the impossibility of successfully replacing the outstill system by that of central distilleries, under all conditions and in all localities, is found in a passage from the report of the Commissioner of Excise in the North-Western Provinces and Oudh for the year 1882-83, which is as follows:—

The figures given in the report for 1871-72 are as startling as any to be found in recent years, and show clearly enough that in the Bundelkhand districts the distillery system utterly broke down:—

	1870-71.		1871-72.	
	Distillery system.		Farming system.	
	R	a. p.	R	a. p.
Tirohan and Badauna Tahsils of Banda	173	8 0	6,617	8 0
District of Hamirpur	2,298	8 0	20,400	0 0

It is inconceivable that the receipts for 1870-71 in any degree indicated the consumption of spirits in the two districts, or that those for 1871-72 proved a rapid change in the habits of the people. The conclusion seems to be obvious, either that the distillery system was wholly unsuited to the country, or that it was badly worked. Both objections were probably true. The distillery system was entirely unsuited to the southern portions of both districts, unless a strong and efficient preventive force had been maintained; and in the northern portions, in which there were only the difficulties that are experienced elsewhere, it seems incredible that in Hamirpur much attention can have been paid to this branch of the administration. Another tract with which also I happen to have personal acquaintance furnishes similar statistics. In the Robertganj Tahsil of the Mirzapur district the revenue from country liquor fell from Rs. 421 to Rs. 11, and rose again on the re-introduction of the farming system in 1868-69 to Rs. 2,000, and subsequently to a steady average for many years of over Rs. 6,000—a sum which the sub-division of the farm and the consequently increased competition have troubled. Here, too, there can be no reasonable doubt that the introduction of the distillery system did not stop drinking, but that in a country for which it was entirely unsuited it gave a fresh impetus to the use of illicit liquor.

The failure of the distillery system was no doubt partly due to inefficient administration, but, even allowing for this, the results stated in this quotation are sufficiently remarkable.

15. Whatever the eventual decision may be on the question whether the outstill system can be successfully applied to whole Provinces, we submit to

Your Lordship's judgment that the information now collected shows that there is no reason for supposing that the Local Governments have shown any indisposition to recognise the necessity of doing everything that is possible to keep consumption under control, even in those tracts where the maintenance of the outstill system has been found to be inevitable, or where it is under trial. We venture to think that this system, as generally administered, does not merit the description given in paragraph 4 of Your Lordship's Despatch No. 28 (Revenue), dated 19th April 1888, in which it is referred to as a system under which "it is in the power of the distiller to make as much spirit and to push the sale thereof by cheapening liquor as far as he possibly can." In every case, even under the farming system of the North-Western Provinces and Berar, that power is subject to limitations of some kind—in all cases the number of places of sale is fixed by the Government, and generally either the number or capacity of the stills is limited, or a minimum selling price is enforced. It should in particular be remembered that the outstill system, except where it is undergoing a period of probation, is as a rule only admitted into localities where experience shows that any other system of taxing consumption must fail; that restrictions are generally enforced, and that these restrictions, so far as they go, are real and effective. In the statement attached to this Despatch Your Lordship will find statistics showing the extent of the operation of the outstill system in each Province.

16. We take this opportunity of making some remarks on the systems of excise administration in operation in Madras and Bombay, and of bringing to Your Lordship's notice the more important of the changes and reforms introduced by Local Governments since our Despatch No. 166, dated 25th June 1887, was written.

17. In Madras, the Local Government may fairly claim to have successfully solved the problem of controlling the consumption of country spirits. The system now in force was introduced at the recommendation of a Committee appointed by the Local Government in 1884. At the suggestion of that Committee the rights of manufacture and of retail sale have been separated; the areas, the right of retail sale in which is sold by auction, have been reduced with the object of eventually excluding the middleman and settling each shop separately; and a system has been introduced, under which the retail vendor may purchase his supply of spirits from any distillery, instead of one under which

	Consumption in gallons reduced to 30° under proof.	Revenue.	
1883-84	12,04,241	28,09,776	each shop was affiliated to a particular distillery.
1884-85	11,85,878	•	This system was adopted from 1st
1885-86	10,14,566	34,75,262	October 1884, and statistics comparing the
1886-87	10,84,474	38,02,136	consumption of, and revenue from, country
1887-88	12,70,146	41,53,197	spirits in the districts into which it

* Omitted, as the year was one of transition from one system to another.]

with practically no increase of consumption, there has been a very great increase in revenue. These figures indicate how fallacious is the argument, sometimes put forward, that because there has been a large increase of the Excise Revenue in recent years, there must have been a corresponding increase in consumption. Since the introduction of the new system there has been a general rise in the retail price of country spirits of from 8 annas to a rupee a gallon of spirit of 30° under proof. The comparatively large consumption in the year 1887-88 is attributed to the prosperity of the agricultural classes, but in view of it the Local Government has enhanced the fixed duty for the future. The system described above is now in force in the greater part of the Presidency, and, even in those localities where outstills are permitted, an attempt is being made to levy, by means of a tree tax, a quantitative tax on the weak toddy spirit produced, the aim of the Government being to extend to the whole Presidency a system under which a quantitative tax is levied on all liquor consumed. The efficiency of the preventive establishments, which enable this system to be successfully worked, has been already noticed.

18. The prevailing system in Bombay is that known as the "still-head duty, central distillery, and guaranteed minimum revenue system." Under this system, the right of manufacture and sale within a district is farmed, but the manufacture is concentrated in one distillery over which strict supervision

is exercised. Every gallon passed out of it is taxed, and the temptation to the farmer to procure illicitly produced liquor and sell it cheaply is remote, as he is required to guarantee a minimum revenue. Statistics of consumption are only available for areas under the central distillery system, which has been gradually extended till it now practically comprises the entire Province. This gradual extension of the area renders it impossible to compare the consumption of the present with that of the past, or the consumption of one past year with that of another. As one system is now in practically universal use, it will be possible in future years to make this comparison; if made now it would be misleading. For the present, it will suffice to invite Your Lordship's attention to the very great increase in the rates of duty set out in Appendix No. II of Mr. Buckland's report, and to the decrease in the volume of the taxed consumption in the city of Bombay, as typical of the influences which have been in operation concurrently with the great increase of revenue. The consumption was 907,000 gallons in 1872-73, 630,000 in 1881-82, and 621,000 in 1886-87. The duty was, during this period, raised from R1 for proof spirit to R2-12 for 25° under proof spirit, and the revenue increased from R7,20,000 to R20,17,476. The chief difficulty which it has been necessary to overcome in Bombay was due to the intermixture of British and Native territory. The solution has, as stated above, been found in the acquisition by the Local Government of the Excise revenues of most of the Native States concerned, which has made it possible to restrict the outstill area to very narrow limits.

From the 1st January 1888, the Local Government has introduced, experimentally, into the districts of Thana and Kolaba a system, by which the purchaser of the right of retail vend pays no license fee and guarantees no revenue, but contracts to pay, as license fee, a percentage on the still-head duty on the spirits he requires, which he must procure from one of the public distilleries. We have as yet received no report from the Bombay Government regarding the measure of success that has attended this experiment, but it seems open to the objection that it leaves the farmer subject to the temptation to procure and sell illicitly-produced liquor.

19. In the preceding paragraph and in paragraph 5 of our Despatch No. 166, dated 25th June 1887, we have explained the difficulties resulting from the interlacing of Native and British territory. Indications have appeared in the public press of a disposition to assert that the acquisition of the excise rights of Native States in certain cases has been prejudicial to the cause of temperance. To enable Your Lordship to estimate the justice of this accusation, we invite

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attention to the Proceedings of our Foreign Department indicated in the margin,

which show that the outstill system which prevailed in Baroda and other States up to 1887 was accompanied by great abuses and the smuggling of cheap liquor into the adjacent British districts. The Government of India has also of late been freely charged with encouraging consumption for the sake of the revenue. It could not be expected that the excise administration of so vast an extent of territory should be incapable of improvement, and we do not assert that it is: mistakes have no doubt occasionally been made in particular tracts or by individual officers, but the accusation that the Government of India, or any Local Government, has knowingly stimulated the consumption of liquor in order to increase the revenue is altogether without foundation. The great increase in the revenue in recent years is mainly due to better administration and growing prosperity, and if there have been other causes at work, they are not such that the Government can be held responsible for them. The increase of revenue has been greatest where the control has been strictest.

20. Except the introduction of a regulated system into Upper Burma in 1888, the details of which were fully set out in our Despatch No. 159, dated the 16th June 1888, no further changes of importance have been introduced into the excise system of any Province since our Despatch of 25th June 1887 was written. More attention is being paid year by year to this department of the administration, and though the difficulties to be overcome are great and diverse in their nature, and though in some cases there may be room for difference of opinion regarding the suitability of the systems under trial, there is no reason to fear that the fundamental principles on which a revenue should be raised from the taxation of drink are likely to be lost sight of either by Local Governments or ourselves.

Statement showing the Revenue derived from the Outstill system, and the area within which it is in force.

	Outstill revenue.	Total excise revenue from country spirits.	Percentage of outstill revenue.	Outstill shops.	Total number of shops, country spirits.	Percentage of outstill shops to total shops.	Outstill area—square miles.	Total area—square miles.	Percentage of outstill area to total area.	Population outstill area.	Total population.
	R	R									
Bengal	31,91,334	22,05,122	61	3,535	4,105	86	...	150,564	...	...	60,703,461
Madras	8,04,928	22,15,029	15	4,200	15,330	27	17,324	100,900	10	4,670,034	39,838,504
Bombay	13,37,388	26,37,728	5	578	3,894	9	7,457	124,122	6	1,458,172	16,061,000
Punjab	7,997	7,61,714	1	15	1,186	1	3,578	106,050	2	276,868	7,186,057
N.-W. Provinces and Oudh	6,00,000	28,00,000	10	1,612	7,394	22	36,824	100,111	34	9,072,694	44,107,869
Central Provinces	3,96,075	15,99,631	28	4,190	8,954	47	43,998	34,445	53	5,214,550	8,080,394
Lower Burma	1,16,483	1,16,483	whole	...	...	...	...	67,220	...	...	3,736,771
Ceara	(Not in force)	(Not in force)	...	...	...	...	...	...	...	...	...
Assam	1,98,641	1,98,641	whole	229	229	whole	1,193	46,341	2	173,056	4,681,426
Hyderabad	9,89,215	9,89,215	whole	1,442	1,442	whole	17,711	17,711	whole	2,072,073	2,072,073

* December 1888—Actually open 4,207. Sanctioned 10,317.

† Approximate.

It must be recollected that this table deals with consumption of "country spirits" only, which term does not include rum. The Assam Government in 1887-88 reduced the number of "country spirit" shops in order to break down a combination of liquor-sellers, and substituted shops for the sale of rum. The old system has since been re-established. The Assam figures are therefore not typical ones.

No. 157, dated 25th May 1889.

From—The Government of India,

To—The Secretary of State for India.

With our Despatch No. 67, dated 12th March 1889, we forwarded to Your Lordship copy of a letter from the Government of Bengal, containing its views on the questions of the maintenance of the outstill system and the introduction of a system of local option in Bengal. These questions had been raised in certain memorials which accompanied our Despatch No. 23, dated 22nd January last. In accordance with the promise made in paragraph 2 of the Despatch of 12th March last, we now forward a series of reports from all Local Governments and Administrations showing the precautions taken, and the extent to which deference is paid to the wishes of the residents of the neighbourhood, before a license is granted to a shop for the sale of liquor.

2. In the memorials forwarded with our Despatch No. 23, dated 22nd January last, two separate and distinct questions were raised, that of the general abolition of the outstill system in Bengal and that of the introduction of a system of local option alluded to in the preceding paragraph. With the general nature of the outstill systems as administered in the several provinces of India, and the extent to which they are in force, Your Lordship has already been made acquainted by our Despatch No. 55, dated the 19th of February last, to which Your Lordship's reply No. 38 of the 28th of March has recently been received, and it is not our intention at present to enter on any further general discussion of this portion of the question. As regards Bengal, however, we stated in paragraph 12 of our Despatch that the excise system of that Province "must be still considered to be in an experimental stage," and that we had "requested the opinion of the Lieutenant-Governor on the question whether, instead of giving it a more extended trial, the outstill system should be generally abolished," and upon that opinion as recorded in the letter from the Government of Bengal which accompanied our Despatch of 12th March last, and the considerations upon which it is based, we beg to offer the following observations.

3. The proposal to resort to a general abolition of outstill systems throughout the Province is, as pointed out by Sir Stuart Bayley, not a new one. In paragraph 14 of our Despatch of the 19th February, we have already called Your Lordship's attention to the fact that since the year 1860 the excise system of Bengal had leaned at one time strongly towards the outstill system, and at another towards the entire suppression of outstill systems and the substitution for them of central distilleries. The table in that paragraph shows that the policy of suppressing outstill systems which is now under discussion has, more than a quarter

of a century ago, deliberately adopted in Bengal. An outstill system, combined from the year 1813 in certain parts of the Province with a farming system, had been established as long ago as 1793, and was maintained with but slight interruptions and modifications for about 60 years, before it was condemned as leading in its then existing form to an increasing consumption of liquor with its attendant evils. In 1859 the Government accordingly resolved to introduce the central distillery system in supersession of all others, and after four years of controversy, peremptory orders were issued in 1863 with a view to giving practical effect to this resolution. The result was that in the four years central distilleries increased in number from 96 to 264, and the outstills diminished from 6,655 to 165.

4. Though the outstill system began to recover ground in 1871, the experiment of the general establishment of central distilleries was practically allowed full scope for thirteen or fourteen years, by which time it was discovered that it had failed in realising the expectations with which it had been introduced. Its weak points were discovered to be (1) the facilities afforded for frauds by distillers in combination with the excise staff; and (2) the temptation given to illicit distillation in outlying districts, to which the transport of liquor from

Vide paragraphs 12 and 13 of our Despatch of the 10th of February. the central distilleries was a matter of

difficulty, owing to want of proper means of communication and to the crude quality of the spirit which rapidly deteriorates and does not endure transport, and where the physical features of the country were such that unlawful production could not be suppressed. These evils gradually became so apparent, and the opposition to the system gained such strength, that the Government of Bengal, although not without much hesitation and reluctance, once more determined upon a reversion to the outstill system in all but central and populous places. The result was that in 1878-79 the number of outstills had risen to 8,911, while but 91 central distilleries were retained. These latter were further reduced by 1880-81 to 22, while outstills had increased to 5,657.

5. The effects of this sudden return to a system previously condemned were unsatisfactory: the price of liquor was lowered, and consumption increased. A large share of this result was doubtless due to the order of the Bengal Board of Revenue issued on the 4th January 1879 directing that the condition of the license under which the capacity of the outstills was limited should be withdrawn. The evils of increasing consumption due to cheap liquor became apparent, and in December 1883 an Excise Commission was appointed, whose report, presented at the close of 1884, was reviewed by the Bengal Government in March 1886. Stated briefly, the recommendations of the Commission were in favour of the re-establishment of the central distillery system in all towns, and the introduction into outlying districts of a regulated outstill system, under which both the minimum price of liquor was to be fixed and its production strictly limited. These recommendations have been practically accepted by the Bengal Government, and their present efforts are mainly directed to working out an efficient excise system upon the lines indicated. The practical problem, on which the fate of the outstill system will in a great measure depend, is whether, under that system, production can be effectually limited, or security obtained that no part of the liquor produced shall escape taxation. As we have explained, Sir Stuart Bayley and his advisers are engaged in dealing with this question at the present moment, and, although it has been decided that the outstill system is one that should not be generally adopted, it would, in our opinion, be premature to pronounce a final opinion on that system as applied in parts of the Province of Bengal, until time shall have been allowed to the responsible authorities to test by observation the practical effect of the reforms now being introduced.

6. The lessons taught by experience support the conclusion that no one system of excise is suitable for a Province where the conditions are so complex. While, therefore, Sir Stuart Bayley is prepared to give every encouragement to the extension of the central distillery system to all suitable localities, and has recently abolished outstills in the districts of Howrah and Hooghly, he is not prepared to view favourably any proposal for their immediate and general suppression all over the Province. He is of opinion that "the mere abolition of outstills in tracts where central distilleries cannot be introduced would obviously not tend to diminish drunkenness," and that as the whole question of

excise is now receiving an exceptional amount of attention, and every effort is being made to improve existing systems upon lines approved and adopted after the most mature and careful consideration, it would be highly impolitic and embarrassing to interrupt the course of the reforms now in progress by such a radical measure of change as that desired by the memorialists. This opinion we fully concur in; we doubt the expediency of uprooting the existing system while it is in process of reform and before it has been shown that a better system can be substituted, and we share the Lieutenant-Governor's hope that "the transition from a system of unrestricted outstills to one of rigid regulation," in those tracts to which experience has shown the outstill system to be most suited, may be attended with satisfactory results.

7. Turning now to the second and wider question raised by the memorialists, namely, that of local option, we are led by a careful consideration of the subject in all its bearings to the conviction that, under the circumstances which now exist, no such system could be successfully administered in any part of India. Any scheme of "local option" pre-supposes the existence of a highly developed system of local or municipal institutions, to which representatives are elected by the mass of the people and in which all conflicting interests command their due share of attention. In the communities in which such institutions are to be found, the necessary control over the actions of the representatives is secured by the right of periodical appeal to the judgment of the people. In India there is no representation of this character: the electoral system, so far as it has been introduced, rests upon the narrow basis of a restricted franchise and large masses of the people and those the least able to make their voices heard are without representation of any kind. No effective check could, therefore, be placed upon the capricious exercise of the power of granting or refusing licenses if it were entrusted to Municipal Committees or Local Boards.

8. "The peculiar conditions of society are," to use the words of the Lieutenant-Governor of Bengal, "such that it is altogether impossible to delegate to local bodies the power of dealing with the complex and difficult problems connected with Excise administration. In the first place, it is not allowable for members of the Muhammadan community to openly countenance or tolerate in any way the consumption of spirituous liquors. The use of spirits is forbidden by the Koran, and the representatives of this community would undoubtedly, were it in their power, uniformly declare against the grant of licenses to sell alcoholic stimulants." And again, notwithstanding that many Hindu gentlemen are entirely free from all prejudice in the matter, the general feeling amongst them is adverse to the consumption of spirits, and they would in most instances join with the Muhammadans in negating proposals to grant licenses. On the other hand, the lower classes who habitually resort to stimulants, and who seldom use them in immoderate or injurious quantities but in many cases as an antidote to the climatic influences to which they are exposed, are entirely unrepresented upon Municipalities and District Boards, and would, were their supply of liquor removed, be undoubtedly forced to have resort to illicit distillation and consumption. We are led by these considerations to the conclusion that it is altogether chimerical to expect that the lower classes could, by the removal of liquor shops, be driven to habits of strict temperance; and that the Government would be guilty of a dereliction of duty if it were to permit the creation of the class tyranny that would inevitably result from the adoption of a system of local option.

9. We fear that the advocates of temperance in England who press for the adoption of this system of administering the liquor traffic, are not well informed regarding the peculiar structure of Asiatic society in general, and of Indian society in particular. To attain even a partial success "local option" demands a certain homogeneity of character, tastes, and moral standards in the community into which it is introduced. In India this condition does not exist; society is not so much an aggregation of individuals, as of classes, and, moreover, of classes whose habits, opinions, and views of right and wrong are widely divergent. On such elected bodies as exist there are no representatives of the great mass of the people, and if the licensing power, unaccompanied as it would be with any kind of responsibility, were entrusted to Municipal and District Boards, it seems very probable that it would be exercised without much forbearance or regard for the susceptibilities of those chiefly interested. It is idle

to expect the difficult problem of the administration of the liquor traffic to be solved by the votes of representatives who are subject to these disabilities, and, in our opinion, no system of "local option" could be devised that would not, under the conditions that have to be dealt with, be doomed to failure.

10. Your Lordship is aware that even in countries where no violent differences of social habits and tastes exist, where representation is fully developed and political life most active, attempts to enforce abstinence under penalties have not been altogether successful or useful to the cause of morality; and we have little hesitation in coming to the conclusion that such attempts would be wholly unsuited to the existing conditions of this country, and that, even if representative institutions were more completely developed than they are, it would be exceedingly unwise to make India a theatre for experiments of this nature. These grave difficulties, which are not absent even in the most advanced cities of the Empire, would be especially felt in the smaller municipalities and outlying districts.

11. But while fully convinced of the impracticability and impolicy of introducing, or attempting to introduce, now or within any measurable distance of time, into this country any general system of local option, we are of opinion that no genuine expression of public opinion should be ignored in deciding whether a liquor license shall be given or not, and particularly in determining the location of a shop. To enable us to place accurately before Your Lordship the facts regarding the extent to which deference is now paid to local public opinion, we called for information from Local Governments bearing upon this aspect of the case. A brief summary of this information is now given.

12. In the district of Ajmere-Merwara, although no special rules have been drawn up upon the subject, the public in the vicinity are consulted as well as the police authorities previous to the opening of a new liquor shop; and the District Magistrate in his capacity of Excise Collector is the authority under whose permission all such shops are licensed.

13. The wishes of the residents of the neighbourhood are similarly consulted in Coorg, in which Province it is stated that, since 1886-87, 35 shops have been closed with a view to checking an undue disposition to drink among the people, while only one new shop has been opened.

14. In the Hyderabad Assigned Districts the number of liquor shops is fixed for each district by the Deputy Commissioner in charge. No remonstrance regarding their location has apparently been ever received, though, "if it were, it would," we are assured, "undoubtedly meet with full consideration."

15. The Chief Commissioner of the Central Provinces reports that although, in his opinion, it is only in one or two of the larger towns in which there exists an educated community whose opinion is of any weight or consequence, nevertheless, if the residents in any locality were to petition for the closing of a shop, the local authorities would give attention to their wishes. But, it is added, that here, as in the Hyderabad Assigned Districts, no instance of such a petition can be recalled. The opening and closing of shops is left entirely to the discretion of the Deputy Commissioners, who are also the District Magistrates, and the excise authorities have no immediate voice in the matter.

16. From Burma it is reported that proper weight is always given to the expressed wishes of the neighbourhood concerning the location of liquor shops, though no rules have been issued upon the subject. The Chief Commissioner cites several instances which have come under his own personal observation of licenses refused or withdrawn in deference to the wishes of local bodies, and states that they might easily be multiplied upon a reference to the district authorities.

17. There is no separate Excise Department in Assam, the Deputy Commissioners and Magistrate having the control over matters of excise within their respective jurisdictions, under the general superintendence of the Commissioner of the Division in the Assam Valley, and the Commissioner of Excise (who is also the Inspector-General of Police) in the rest of the Province. Representations against the establishment or maintenance of shops, though rare, are on record; and the Chief Commissioner reports that they "seem always to have received the very fullest consideration." It is stated that "Agents of Tea Gardens have sometimes a word to say for or against the establishment of a shop in a particular locality." We may add that the Chief Commissioner has been requested to make a careful enquiry into the cases referred to in the letters which accompanied Your Lordship's Despatch No. 18, dated 31st January 1889, regarding

the alleged facilities for drinking afforded to, and increase of drunkenness among, tea garden labourers, and the opening of butstalls and shops in spite of the protests of planters.

18. In Bengal more specific instructions have been issued for the guidance of the responsible officers in such matters. They have been instructed, in the circular quoted in paragraph 2 of the letter from the Government of Bengal, which forms one of the enclosures to this Despatch, to ascertain and to consider, though not necessarily in all cases to conform to, local opinion. Where municipalities exist, the Board of Revenue has been specifically directed to see that the Commissioners shall always be consulted; and remonstrances made by local bodies against the selection of the site for shops are never disregarded without good reason. It is further particularly ordered that, save for special cause, no liquor shops shall be opened near market places, schools, factories, and other places where they are likely to afford more than usual temptations to drink, or to offend public feeling.

19. In the North-Western Provinces, although, as in most of the preceding cases, no rules exist requiring that the opinion of local bodies should be obtained upon the licensing question, the excise regulations provide that opportunity shall be given to zemindars and neighbours of objecting to the position of shops; and any representations made by them or by local public bodies receive attention.

20. The excise rules of the Punjab distinctly lay down that no shop shall be opened in a village the inhabitants of which object to its establishment; and as a consequence the Lieutenant-Governor reports that various instances have occurred of the refusal to grant or renew licenses on these grounds. Nor is a single instance recalled in which a shop has been opened in opposition to the wishes of the inhabitants. The District Magistrate is here also the local head of the Excise administration, and no shops are opened or closed without his knowledge and concurrence.

21. The report of the Madras Government shows that remonstrances against the establishment of liquor shops are of rare occurrence; but when received, enquiry is made, and such attention as may appear reasonable is given to them. It is stated that but few new shops are now opened in the Presidency, and the number of those licensed is being rapidly reduced. In the majority of places in which there are shops public bodies do not exist, and where they do, they can in no sense be called representative. The Magistracy here, as elsewhere, are invested with the licensing authority.

22. Sanction to the licensing of shops in Bombay is only given after enquiry made in the districts by the Collectors, and in the island of Bombay by the Commissioner of Police. No complaints have apparently ever been received that representations made in the matter have not received the fullest attention. But it is pointed out that, as a rule, the inhabitants of that Presidency are not sufficiently interested to stir in the matter uninvited and, "if invited, would simply become the tools of wire-pullers on each side."

23. These facts, and the reports from which they are taken, will, we trust, afford Your Lordship sufficient assurance that local prejudices and feeling in the matter of the licensing of liquor shops are not lightly disregarded, and that safeguards are, as a rule, imposed against their establishment in localities where they might prove a source of annoyance to the neighbourhood, or in such numbers that they might unduly facilitate drinking. It is to the issue of general instructions for the guidance of district officers in dealing with excise questions, rather than to any scheme of local option that we must look, under the conditions of society in India, for the improvement of the Indian system of excise. With this view we shall forward a copy of this Despatch and its enclosures to all the subordinate Governments. Looking to the difficulties that would attend any attempt to suddenly introduce uniformity of practice over such a vast area as India, we have not thought it desirable to issue specific instructions on the subject at the present moment. The facts now brought together will enable each Government to learn what other Governments are doing, and to introduce such measures as may appear best suited to local conditions. The procedure adopted in Bengal, where distinct instructions have been given to the licensing officers to ascertain and consider local opinion, and where directions have been issued that, where municipalities exist, the Commissioners should be consulted in determining the location of shops, might perhaps be

generally followed with advantage; but beyond indicating our view to this effect, we prefer to leave the settlement of details to the several Governments. We shall, however, continue to give our attention to the subject, and we hope that it may hereafter be found possible to frame general rules, which Local Governments can supplement by the issue of instructions adapted to the special requirements of each province or locality.

No. 1.0—2.7 H., dated 19th February 1889.

From—H. J. S. Corron, Esq., Officiating Secretary to the Government of Bengal,
To—The Secretary to the Government of India, Department of Finance and Commerce.

I AM directed to acknowledge the receipt of the orders of the Government of India No. 496, dated 25th January 1889, in which the opinion of the Lieutenant-Governor is invited on the following questions:—

- (1) Whether the outstill system, instead of being given a more extended trial, should be generally abolished; and
- (2) Whether a system of local option, as advocated by certain Associations, should be introduced in Bengal.

2. In reply I am to say that the first of these questions has always been a subject of burning discussion in Bengal; and the Lieutenant-Governor considers that it will be impossible to give any answer to it, without considering historically the policy which has been followed from time to time in the management of the excise on country spirits in these Provinces. The record of experience will be a more useful guide to future action than any expression of opinion based only on theoretic or abstract grounds. A full historical sketch will, I am to say, be found in the Report of the Bengal Excise Commission of 1883-84, to which reference is invited for a complete exposition of the Bengal Excise policy, both historically and otherwise; and the Lieutenant-Governor therefore bids me to confine myself in this letter to a summary which will bring into bold relief the important features connected with the changes made.

8. Under Regulation XXXIV of 1793 an outstill system was established, and a daily tax levied on each still at rates varying according to the importance of different localities. Under Regulation X of 1813, sudder or central distilleries were established at the head-quarters and in large towns of 21 districts, but the experiment was pronounced unsuccessful, and in a very few years most of them were abolished. By this Regulation outstills situated beyond 8 miles from a sudder distillery were to be managed as before; but authority was also given to farm the exclusive right to manufacture and sell spirituous liquors for any period not exceeding one year. Under Regulation VII of 1824 the limitation of farms to a term of one year was rescinded, and the farming system in other ways extended and strengthened. The result of this Regulation was that the whole Province was soon practically let in farm. At first the revenue increased, but it afterwards fell off from 19 lakhs in 1829-30 to 13½ lakhs in 1834-35. This collapse in revenue was followed by the appointment in 1840 and 1844 of two Abkari Commissioners, whose jurisdiction was confined in Bengal Proper. These appointments, again, were abolished in 1852 and 1853; but the system of excise, whether administered under special Commissioners or the ordinary staff of revenue officers, did not change, and as a rule was outstill, which a few sudder distilleries only maintained where they had previously existed. The farming system continued all along in Behar and Chota Nagpore.

4. It may be said at once that the farming system, which remained in force in those portions of the Lower Provinces where drinking is most prevalent, for nearly half a century, was a thoroughly bad one. Every encouragement was given to drinking; for the more shops open, and the greater the consumption of liquor, the larger was the farmer's profit. Both from the revenue and moral point of view it is a system to be condemned. The management of the outstill system was also very unsatisfactory; shops were multiplied, and the result was too often the simultaneous increase of drinking and of the excise revenue. These evils were so apparent that it was resolved by Government in 1859 to introduce the central distillery system in the place of all others. It was pointed out that the existing system of outstills

was objectionable because it involved no minimum rate of duty—indeed had no fixed excise on spirits at all—because much of the general dissatisfaction with the abkari system which existed had arisen from the outstill practice, and because that system looked for a revenue rather to a very large number of spirit shops and a great consumption than to a high tax and discouraged consumption. A long controversy then ensued. The objections to the general introduction of the central distillery system—objections which, as it will be seen, experience has shown to be valid—were forcibly brought to notice, but they were overruled; and in 1863 peremptory orders were issued directing that outstills should be generally abolished and central distilleries established in their place. When these orders were passed there were 96 central distilleries and 6,655 outstills in the Province; four years later the number of outstills had been reduced to 167, and the number of central distilleries increased to 264.

5. The change of policy upon which the Government of India have now called upon the Lieutenant-Governor for an expression of opinion was therefore deliberately adopted more than a quarter of a century ago. The experiment of the general abolition of the outstill system has been tried. For a period of thirteen or fourteen years it was allowed full scope, and the records of Government contain the amplest evidence of the effect produced. The minute recorded by Mr. A. Money, C. B., Member of the Board of Revenue, dated 25th January 1875, upon certain memorials which had then been presented against the excise administration of Bengal, contains the following remarks:—

“In 1859 the Government determined to extend the sudder distillery system as the best mode of maintaining a proper equilibrium between the real demand for liquor and the means for its supply. The theory of this system is perfect. Every ounce of liquor consumed pays duty before it is offered to the public. The rise or fall of the demand is as correct in its indication as are the changes in a barometer; and according to such should the duty be regulated. The rate of duty becomes the best and proper check against undue facilities for drinking. It logically follows that no necessity exists for imposing any limit on the number of shops. The rate of duty provides the necessary check.”

The theoretic advantage of a central distillery system was therefore fully appreciated; but Mr. Money went on to explain that the system had not fulfilled the hopes of those who had insisted on its extension throughout the Presidency. Perfect in theory, it was found to have two weak points in practice—the facilities it affords for fraud and the temptations and comparative immunity it holds out to illicit distillation. It is impossible to prevent combination between the members of the Excise staff and the distillers and shopkeepers. It is a simple and easy matter for instance to pass out of the distillery 50 gallons of spirit, taking duty on only 40 gallons and entering only 40 in the books, the profit on the odd 10 gallons being divided between the officer in charge of the distillery and the shopkeeper; or it is an equally simple process to enter the whole of the 50 gallons in the register, but at a strength much below the real strength, and to levy the duty on the registered strength and divide the profit on the margin which has escaped taxation. On the other hand, illicit distillation continues practically unchecked; the revenue authorities have to trust almost entirely to the police, and experience has proved that the police are of very little use as abkari detectives. Illicit distillation is usually carried on indoors, and the sale of the liquor in most cases proves nothing, as the distiller is the shopkeeper licensed by Government. It was shown by careful enquiry in 1868 that in a very large number of shops, the details of which were specified in the report submitted, the amount of duty-paid liquor sold was insufficient to give a profit to cover the license fees and other expenses; and as it may be presumed that the liquor sellers did not carry on their business at a loss, the conclusion is inevitable that most of the liquor which they sold was smuggled.

6. The extent of frauds committed by distillery officers under the central distillery system is discussed at some length on pages 54 to 57 of the Report of the Bengal Excise Commission. Many of the distilleries were situated, at great distances from either district or sub-divisional head-quarters, in outlying jungly tracts, and practically out of the reach of all effectual supervision. The

duty on the spirit manufactured was many times the cost of production, and it is not surprising therefore that distillery and excise subordinates combined almost everywhere to defraud the revenue by passing out the spirit either duty-free or on payment of less than the proper rate. The records of every year are full of cases in which the officers in charge of distilleries were convicted and punished; and there can be no doubt that the number of frauds detected was very small compared with those not found out. The Commission, by careful calculation and enquiry into the statistics of the number of gallons which paid duty and passed into consumption during the year 1875-76, ascertained that the amount of spirit fraudulently sent out from central distilleries in that year could scarcely have been less than 340,000 gallons, and may have amounted to as much as 500,000 gallons, and that the revenues were therefore defrauded of an amount varying from Rs. 7,70,000 to Rs. 12,70,000. There can be no doubt that frauds to a similar extent were perpetrated during every year of the central distillery system. The Board of Revenue furnished elaborate comparative statistics in 1870, which showed that during the previous ten years the revenue receipts were 55 or 60 lakhs less than they would have been under the system which the central distilleries superseded. The whole of this loss of revenue may be attributed to the collusion of the lower excise officials with the manufacturers.

7. The prevalence of illicit distillation during the central distillery period is no less conclusively established. The Commission came to the conclusion, which is supported by evidence recorded in their report, that, especially in the molwa-producing tracts, there was much illicit distillation during the period in which these tracts were exclusively supplied from central distilleries. They consider that there was extensive smuggling along various parts of the frontier. They were indeed of opinion that the harm done by illicit distillation and smuggling was less than the injury caused to the revenue by the illicit practices in central distilleries. But they pointed out that the demoralisation occasioned by the prevalence of illicit distillation and smuggling was much graver than a mere loss of revenue, and they have shown with great force and justice that among the greatest evils connected with the prevalence of such illicit practices in India are the dangers of abuse of power on the part of the preventive and detective establishments employed to restrain them, and the opportunities which are afforded to harass and oppress innocent people.

8. The evils which are described by the report of the Excise Commission were sufficiently obvious at the time to the district officers by whom the distillery system was worked, and who saw its defects; and they remonstrated with such persistence that the opposition to the system grew stronger and stronger until, under Sir Ashley Eden's administration, it was almost entirely swept away and the outstill system substituted. The orders for the abolition of the old system were very gradually and reluctantly passed; but when once a change in policy had been definitely established, the pendulum soon swung to the very other extreme. The principle was laid down by Mr. Alonzo Money that "the sadder distillery system should be adopted in towns and the outstill system in the interior, with strict precautions against the tendency of the latter to multiply outstills in the interior, and against the tendency of the former to increase shops in towns." And so Sir George Campbell, while he was not fully prepared to admit that the central distillery system had failed from faults inherent in it, or that it was expedient to return to the monthly-duty system in its old form, expressed his readiness, so long ago as in 1871, to consider any recommendations that in specially remote and thinly-populated tracts one or more stills should be licensed at a monthly fee, which would cover a fair duty on all the spirit that such stills could turn out. In a similar way Sir Richard Temple acknowledged in more than one Resolution that the outstill system had been found better adapted than central distilleries to outlying parts of the country. In accordance with these views the number of central distilleries had been reduced from 257, the number in 1868-69, to 211 in 1877-78, and the number of outstills had increased during the same period from 261 to 862. But the orders of 1877, which directed that sadder distilleries should be maintained only at central and populous places, and that outstills should be introduced beyond this radius, immediately produced a more marked effect. The very next year the number of outstills had increased to 3,911, and the central distilleries were reduced to

91. In 1880-81 there were only 22 central distilleries left in Bengal, while the outstills had increased to 5,857.

9. While avoiding one error, the Excise administration of these provinces has thus fallen into another. There can be no doubt that the abolition of the central distilleries was followed in many places by an increase in the consumption of liquor. The Government was not unaware of this tendency, and steps were taken in 1860-81 to effect a reduction in the number of outstills. By 1884-85 the number had been reduced to 3,747; but the evil was so great and urgent, and the price of liquor had been so obviously cheapened by the extension of the outstill system, that it became necessary to take special measures to remedy the evil, and with this object the Bengal Excise Commission was appointed in December 1883. The report of this Commission is a landmark in the history of Bengal Excise. It was submitted to Government towards the close of 1884, and was reviewed by Sir Rivers Thompson's government in a Resolution dated 10th March 1886, from which it will be convenient to make the following extract:—

"8. The special object of the appointment of the Commission was to ascertain the causes of this increase, and to suggest means by which they might be removed; and their enquiries were directed mainly to these points. In their opinion the primary cause of the growth of the habit of drinking among the people is the influence of social, moral, religious changes in relaxing the restrictions which had previously kept large classes from indulging in spirituous liquors; but there have been other minor causes, without which consumption could not have developed as it is seen to have done. Increase in the purchasing power of the consuming classes is assigned as a reason for some portion of the increased consumption; but the greater part of it must be otherwise accounted for, and the Commission enumerate the following causes:—

- (1) The suspension in 1878 of the long-established rule limiting the capacity of stills, thus enabling the distillers to produce from their large stills greatly increased quantities of liquor at greatly reduced prices.
- (2) The excessive number of shops that have been licensed, total population and area having alone been considered, although the proportion of the consuming population to the total population varies greatly in different districts.
- (3) Improper selection of sites for shops.

9. The recommendations which the Commissioners make for removing these causes of increased consumption, and for remedying minor evils incidental to the present system, may be summarised as follows:—

- (1) Central distilleries should be re-established in all large towns at the head-quarters of districts in which there is a great demand for country spirit.
- (2) In other towns the stills should be grouped within one enclosure outside the inhabited parts of the town, and care should be exercised in the selection of the retail shops within the town supplied by these stills.
- (3) In each district a maximum aggregate capacity for all outstills should be fixed, and the number of outstills and size of each still should be determined with reference to the maximum aggregate. All stills holding more than 10 seers should be of metal, and should be registered and stamped by the Excise authorities. The upset price of each still should be proportionate to its capacity, and should be calculated on the basis of the duty (at a rate fixed by Government) which could be levied on its outturn at a given strength.
- (4) The aggregate capacity of the fermenting vats allowed to each still should also be fixed.
- (5) A minimum price should be fixed for the cheapest sort of liquor according to the circumstances of each district and the prices now prevailing. On this subject Mr. Reily dissented from his colleagues.
- (6) Excise establishments should be reconstituted on a more liberal scale."

10. On the various recommendations made by the Commission on minor points it is unnecessary to dwell. It is sufficient to say that the principles laid down by the Excise Commission have almost without exception been accepted by Government. The elaborate enclosures which accompanied my letter No. E 75, dated 6th December 1888, will show how far it has been found possible to give effect to them during the past 2½ years. In the face of all the difficulties which must everywhere accompany the introduction of a new system, it cannot be said that all the restrictions recommended have as yet been successfully imposed; but it may be fairly urged that great improvements have been effected; that the principle has definitely been established; that the distiller, under the outstill system, is not free to brew as much spirit as he likes, and sell it when he never he likes; and that the levy of duty as well as the conditions both of distillation and sale are carefully regulated with reference to the existing local demand. The system in force is in fact a system of regulated outstills, and, as the Excise Commission have been careful to explain, if the producing capacity of the outstills is limited, and the revenue paid on each outstill is calculated in proportion to its capacity, there is little real difference in principle between such a system and the system of central distilleries.

On the other hand, the obvious advantages of the outstill system in repressing fraud and illicit distillation are retained. It has been pointed out by the Excise Commission that almost all the abuses connected with the management of the central distilleries disappeared with their abolition in outlying and imperfectly supervised tracts. There may be some openings for corruption at present, but these are comparatively small, and detection is much more easy with even moderately watchful supervision. The outstill-holder is urged by the strongest motive of self-interest to do all in his power to put down illicit distillation, while the retail vendor, under the central distillery system, was often himself the chief illicit distiller.

11. The success of the present system of regulated outstill distillation must, however, entirely depend upon whether it is found possible to limit the size of the stills and vats. The Lieutenant-Governor has already observed that, unless the experiment of limiting their capacity or, in other words, of restricting the amount of proof-spirit to be distilled in a month in each outstill, can be successfully carried out, he is unable to see how the outstill system can fail to degenerate into the old indefensible arrangement under which the outstill-holder becomes a farmer pure and simple, with full power and every inducement to cheapen his liquor and increase the consumption thereof to the utmost possible extent. He has freely admitted that unless by some means the outturn of liquor from the outstill system can in practice be restricted, it will be exceedingly difficult, if not impossible, to justify the continuance of the system. The regulation of the outturn and the levy of a proportionate duty on it are therefore the main points to which the efforts of the Government of Bengal and of the officers employed under Government in carrying out its excise policy are now directed. Such regulation is deemed by some to be impossible; by others it is thought to be neither impossible nor even very difficult. But difficult or easy, it is the point upon which the maintenance of the system turns.

12. The Lieutenant-Governor is convinced that the repeated changes which have been made in the system of excise in country spirits are most injurious, and that no exclusive system can be adapted to these Provinces. He desires me to express his emphatic concurrence with the following remarks recorded in paragraph 102 of the Report of the Excise Commission:—

"At the best, every system of excise that has yet been devised has evils inherent in it, and dangers which have to be constantly guarded against. There is no system either unobjectionable in theory or faultless in practice, and all that can be done is to adopt for each place the form of taxation and manner of working which may seem best suited to it, and most likely to check avowed consumption without giving an irrestrainable impetus to unlawful practices. This conclusion has forced itself upon the Commission as the main outcome of their enquiries, and it has been clearly indicated throughout this report, but they think that it cannot be stated too strongly and scarcely repeated too often. For in looking back over the management of Excise in Bengal since 1790, nothing comes out more clearly than the mischief caused

by the belief that the particular system in favour at a given time was the one perfect and universally applicable system; and by the determination of its supporters to induce it everywhere and at all risks."

The central distillery system failed, because it was indiscriminately applied to all parts of the country without proper means of supervision, and no better success was obtained when outstills were introduced with equal indiscriminate and equally without proper check and control. It was with due regard to previous experience, and the recommendations of the Commission, that the cardinal principle was laid down by Sir Rivers Thompson's Government that "an outstill system properly regulated is the most suitable for the country in general, but where special means of close supervision exist, and a large drinking population is found in a small and well-defined area, central distilleries, in which alone a uniform tax can be levied on spirit according to its strength, should be established." Under these instructions no uniform system has been adopted, but different systems have been applied which vary with the conditions and circumstances of different parts of the country. The tendency to which Sir Stewart Bayley has always given every encouragement is to extend central distilleries to every locality favourable to their introduction. The number of distilleries and distillery shops has increased from 21 and 479 in 1854-55 to 25 and 570 respectively in 1887-88. It is now in contemplation to gradually replace the outstill system by central distilleries throughout the whole tract of country in the immediate neighbourhood of Calcutta.

13. These observations, in which the history of the past has been reviewed and the present excise policy of the Government has been briefly described, will, the Lieutenant-Governor trusts, be found to furnish a sufficient answer to the first of the specific questions raised in your present letter. Sir Stewart Bayley is not prepared to look favourably on any proposal for the immediate or universal abolition of the outstill system in these Provinces. He is not in a position to suggest the general introduction of any other system in its place. Experience has decisively shown that the re-introduction of the old central distillery system, as it was worked in rural tracts, would produce demoralising results which are certainly not less injurious to the country at large than are the evils of the outstill system. The mere abolition of outstills in tracts where central distilleries cannot be introduced would obviously not tend in any way to diminish drunkenness. The whole question of excise is now receiving an exceptional amount of consideration, both at the hands of Government and from the Revenue officers entrusted with the administration; the supervision of the settlements of excise shops for the ensuing year,—a process which includes enquiry into the number of outstills to be licensed, the specific locality to be fixed upon for each outstill, the restrictions to be imposed on each outstill as regards still and vat capacity, the upset prices to be fixed in order to assimilate the rate of fee to the rate of duty payable on distillery liquor in the neighbourhood, and the minimum price to be sanctioned for retail sales,—has been imposed on a specially selected officer of standing and experience in excise matters, and the appointment of a Special Excise Commissioner in Bengal has been recommended to the Government of India and the Secretary of State, with immediate reference to the necessity of enforcing organisation in the management of this important department. The moment would, therefore, in the Lieutenant-Governor's opinion, be very inopportune for venturing upon any new departure in the administration. Every effort is now being made to improve existing systems on the lines of a policy accepted and approved, a large increase of expenditure has been incurred in the revision of distillery establishments, and proposals are under consideration for further strengthening the special Excise preventive staff which is now too weak for efficient control. It has already been reported to the Government of India that the transition from a system of unrestricted outstills to one of rigid regulation admits only of gradual accomplishment, but that the facts in the possession of this Government afford good ground for believing that it may be worked to a successful issue. The interruption to these reforms, which would be occasioned by any such radical measures as the general abolition of the outstill system, with nothing better than central distilleries to replace it in all localities, would create embarrassment and difficulties the end of which it is not easy to foresee.

14. Turning now to the second question raised in your letter, I am to say that the Lieutenant-Governor is convinced that it will not be possible to introduce into Bengal any such system of local option as has been advocated by the Associations who have presented memorials to the Secretary of State. The peculiar conditions of society in this country are such that it is altogether impossible to delegate to local bodies the power of dealing with the complex and difficult problems connected with Excise administration. In the first place it is not allowable for members of the Mahomedan community to openly countenance or tolerate in any way the consumption of spirituous liquors. The use of spirits is forbidden by the Koran. As a matter of fact, Mahomedans in Bengal are, as a rule, very abstemious, and the upper classes, rarely, if ever, indulge in drinking. The representatives of this community would undoubtedly, if it were in their power to do so, declare absolutely for the prohibition of all alcoholic stimulants. It would be incumbent on them by the tenets of their religion to do so. A Mahomedan gentleman, although he may tolerate the consumption of spirits by others when he is not responsible for its repression, could not venture to rise in his place at a meeting of a Municipality or District Board, and authorize the establishment of a liquor shop anywhere or under any restrictions. Similarly, in the case of Hindus, who are not restrained by any religious sentiment from dealing fairly with excise questions, it is no less the fact that the upper classes of the community who, from the nature of the case, can alone find representation in local bodies, are equally precluded from openly countenancing the establishment of shops for the sale of liquor. Notwithstanding that many Hindoo gentlemen are without prejudice in regard to spirit drinking amongst themselves, and will occasionally indulge in private. It is a matter of notoriety that public opinion on the subject runs so strongly among them that one and all of them, including those who drink in private, would object in the same manner as the Mahomedans would do to any proposal for licensing a spirit shop. The influence of public opinion operates almost as strongly within the Hindoo community in this respect as does the direct teaching of the Koran upon a Mahomedan. If, therefore, power without responsibility is entrusted to local bodies, whether Municipalities or District Boards, consisting as such bodies must do of a large majority of Hindoo and Mahomedan gentlemen, there can be no doubt but that the lower classes who are not represented, but who habitually use stimulants, would be driven to the consumption of illicit liquor, and the whole system of Excise administration would be thrown into confusion. This condition of things is not likely to be materially modified for many years.

15. It is necessary for the Government to guard against any such class tyranny as the introduction of local option in this country would infallibly create. There is a certain proportion of people in Bengal,—fortunately a proportion much less than obtains in most other countries, but still considerable,—who are accustomed to drinking and whose craving for stimulants must be satisfied. "It is," as Mr. Money wrote in the Minute which has already been quoted in this letter, "mere foolishness to expect that a certain proportion of the people of this country will not continue to use stimulants, or that the Excise revenue will not increase. As the upper classes adopt more and more European habits, we must expect to see them take the bad with the good, and probably at first even more of the bad than of the good; while as the position of the lower classes improves, as agricultural produce yields a better price to the cultivator, and yearly the number increases of men, women, and children who earn a livelihood such as they never dreamt of in mills and factories, there will be a larger consumption of everything the mass of the people care for. They will wear more clothes, they will eat more food, and they will drink more liquor. Any attempt to enforce sobriety in a country where illicit distillation is so easy and so difficult of detection would be a failure. All we can do is to limit ourselves to supplying the demand, and not to create it; to open no new shops except on proof that they are required to meet an existing want; and to act on an honest recognition of the truth that the Excise revenue is a very small matter in comparison with the comfort and well-being of the people." It is not the case with the great bulk of the lower classes who habitually use stimulants that they drink only for the purpose of intoxicating themselves. The statement is frequently made,

but it is not more true than it would be if applied to similar classes in England. If, however, this were the case, it would still be impossible to enforce sobriety by the prohibition of drinking, and, were it possible, the risk must always be great that those who are used to drink would be driven from the comparatively innocuous spirit of the country to the consumption of more injurious drugs. It is mainly for the protection of the labouring classes, who are accustomed to some stimulant, that is incumbent on the Government to retain its authority over the liquor traffic, and while regulating consumption by every means within its power, not to deny altogether to the unrepresented masses the opportunity of satisfying their reasonable craving. It cannot be expected that local bodies would be in any degree representative of the classes who are affected by local excise measures. To entrust the Excise administration of the country to their hands would lead to class intolerance and class restrictions, which can only be obviated by the direct and independent action of Government.

16. At the same time the Lieutenant-Governor is of opinion that a proper deference should be paid to expressions of local opinion in questions connected with the liquor traffic as well as in other matters. It is the duty of the Government to ascertain the sentiment and desire of the community amongst whom liquor shops are introduced, to comply with it whenever possible, and not to overrule it except under circumstances where such a procedure can easily be justified. The expression of opinion of Municipalities and District Boards, especially in regard to details such as the choice of sites and like, will often be a valuable exponent of public feeling to which due attention should always be paid. Such local sentiment is entitled to consideration, and it will be found that various orders have from time to time been issued by this Government and the Board of Revenue in which the observance of this policy is enjoined. It has been directed that the sites of shops should not be chosen near to market places, bathing ghats and places of public resort, schools, hospitals, places of worship, factories, the interior of villages, the sides of roads leading to bathing ghats or places of water-supply, and in some districts along main roads or in villages inhabited by aborigines of known drinking habits. The existence of a nuisance by reason of the establishment of shops is not tolerated, and every possible concession to public opinion is accorded in such matters. The Lieutenant-Governor, however, cannot admit that, under the existing conditions of these Provinces, there is any justification for going further than this, or for introducing in any shape a system of local option among local bodies, and for entrusting them with the power to prevent the sale of liquors.

No. 1-0-2-16E., dated the 4th April 1889.

From—H. J. S. Cotton, Esq., Offg. Secy. to the Govt. of Bengal,
To—The Secretary to the Govt. of India, Dept. of Finance and Commerce.

I am directed to acknowledge the receipt of your letter No. 994, dated the 22nd February 1889, enquiring—

- (1) whether any, and if so what, rule or procedure is prescribed in Bengal requiring the wishes of the residents to be ascertained before a shop for the sale of intoxicating liquors is licensed in any locality;
- (2) whether the rules require the opinion of local public bodies to be asked, or if it is customary to do so;
- (3) whether attention is paid to any remonstrance which the residents or local bodies may make and whether their wishes are taken into consideration; and
- (4) whether liquor shops are opened and closed at the discretion of the officers of the Excise Department, or whether the police or magisterial authorities are consulted in the matter.

2. In reply to the first three questions raised by the Government of India, I am desired to say that no hard-and-fast procedure has been prescribed in these provinces. Local officers are guided by the following instructions

which were issued by the Board of Revenue in their circular No. 666B., dated 2nd June 1886:—

"The Board are averse to laying down a hard-and-fast rule on the subject of the selection of sites, and the Government have only insisted on greater care being exercised in the matter. The following principles may generally be observed. Each shop should be fairly accessible, as the more public is the place of vend, the better will be the supervision; local opinion should be considered, though not necessarily followed; on the other hand, sites should not, without some good reason, be chosen, near to market places, bathing ghâts and places of public resort, schools, hospitals, places of worship, factories, the interior of villages, the sides of roads leading to bathing ghâts or places of water-supply, and in some districts the sites of main roads and villages inhabited by aborigines of known drinking habits."

It was recently brought to notice by Mr. Westmacott's enquiries in the Hooghly district that the Board's orders respecting sites had been neglected in some cases, and the opportunity has again been taken to enjoin Collectors to be specially careful in selecting sites where complaints have been made, or where it is found that from any reason the sites already selected are objectionable. It has been pointed out that, as a general rule, outstills should not be in bazars or at the entrance to bazars; and that, though they should be easily accessible to persons requiring liquor, they should not be in such situations as to obtrude themselves on the attention of the public, or to render persons passing by subject to annoyance from those who drink at the outstills.

The Board report that remonstrances against the grant of a license or selection of a site are seldom made by residents or by local bodies, but that their wishes, when expressed, are duly considered, and are not disregarded without good reason.

In regard to municipalities, it was directed by this Government in 1864, in accordance with the recommendation of the Excise Commission, that the Municipal Commissioners should be consulted in the choice of sites; and it is now reported by the Board that due attention is paid to the views of these local authorities before opening liquor shops within municipal limits.

3. With reference to the last enquiry of your letter, I am to say that under the excise rules now in force the Collector is required to lay before the Magistrate, and where there is a cantonment, before the officer commanding the station, a list of all the shops to be licensed during the ensuing official year. The Magistrate is empowered to object to any new site on which it is proposed to open a new shop, and to any old site if the experience of the past year has suggested doubts as to the advisability of renewing the license. After the licenses are sold, the Magistrate is again consulted with regard to the character of the licensees, and may object to any person who appears to him to be unsuitable.

In Calcutta a certificate of good character from the Commissioner of Police is required before a license can be finally granted and issued. The Excise Superintendent is also required to consult the Commissioner of Police with regard to every new site, and no such site is let by auction or otherwise unless it has been approved by both officers, subject to a reference to the Board of Revenue in case of disagreement. Before a shop is opened on a new site, notice of the intention to do so is published at the police-station and in a conspicuous place on or near the proposed site at least fifteen days before the grant of the license; and all objections urged by the inhabitants are carefully considered by the Superintendent in communication with the Commissioner of Police. There have quite recently been several instances in Calcutta in which, when the neighbouring residents have objected to the site of a shop for sufficient reasons, permission to open it has been refused by the police authorities.

4. A license which has been regularly issued can only be cancelled during the period of its currency by the Collector, under section 29, Act VII (B.C.) of 1878, if the fee or duty therein specified be not paid, if any other condition of the license is violated, or if the holder is convicted of a non-bailable offence. The police and magisterial authorities are not ordinarily consulted when a shop is closed under this procedure.

No. 2086, dated 18th July 1889.

From—E. J. SINKINSON, Esq., Officiating Secretary to the Government of India,
DEPARTMENT OF FINANCE AND COMMERCE.

To—All Local Governments and Administrations.

In my letter No. 994, dated the 22nd February 1889, Local Governments and Administrations were asked for reports showing to what extent the wishes of the residents in the neighbourhood are ascertained and considered before a shop for the sale of intoxicating liquors is licensed in any locality. I am now directed to forward copies of the replies received to that letter and of the despatch of the Government of India* with which they were forwarded to Her

Majesty's Secretary of State, and to invite special attention to paragraph 23 of the despatch, which explains the object with which the enclosed papers are circulated.

2. It will be observed that, in the opinion of the Government of India, the best method of ensuring that due regard shall be paid to local public opinion in the matter of licensing liquorshops consists in the issue of appropriate instructions to the officers to whom the excise administration of districts is entrusted. The Government of India do not consider that it would be useful at present to issue any general instructions on the subject applicable to all provinces, but desire that the several Governments may give the matter careful attention, and after consideration of the measures in force and the experience gained in other provinces, as described in the enclosures of this letter, take such steps to secure the object in view as may seem suitable. The Government of India are inclined to think that the procedure adopted in Bengal, where distinct instructions have been given to the licensing officers to ascertain and consider local opinion, and directions have been issued that where municipalities exist the Municipal Commissioners should be consulted in determining the location of shops, might be generally followed with advantage. But having regard to the varying conditions of different provinces, it has been thought desirable for the present to leave to Local Governments full discretion to decide what measures are expedient in each case.

No. 67 (Revenue), dated 18th July 1889.

From—The Secretary of State for India,
To—The Government of India.

I HAVE considered in Council Your Excellency's letter (No. 157, dated 25th May 1889, with enclosures, concerning the outstill system of excise in Bengal, and concerning the advisability of introducing some form of local option in granting or continuing licenses for liquor shops. Since your present letter was sent, Your Excellency will have received my despatch, dated the 16th May, forwarding a copy of a report of debate in the House of Commons on the 30th April, and expressing my confidence that your Government would, in accordance with the policy which you have already adopted, proceed, with as little delay as possible, to carry into effect measures for the more effectual control and discouragement of the liquor traffic.

2. In regard to the outstill system in Bengal, I find that in March 1886 it was decided by the Bengal Government, after reviewing the report of the Excise Commission, to re-establish the central distillery system in all towns and to regulate more effectually the working of the outstill system. I gather, however, that up to a recent date, the central distillery system had been re-introduced into the Howrah and Hooghly districts only, and that it was still doubtful whether the working and yield of outstills could effectively be regulated. Meanwhile, a Bengal officer, specially versed in excise matters, has reported that in all districts of Bombay the central distillery system can be effectively worked, and that it could be applied equally well to most Bengal districts. I hope that the rate of reform in Bengal will be materially accelerated, and that the ratio of excise revenue raised under the outstill system will be reduced

* See enclosure to Government of India, letter No. 55 of 1889. from 61 per cent. to some such ratio as that which obtains in Madras and the North-Western Pro-

vices at any rate, if not to that obtaining in Bombay. I consider that the outstill system should not be allowed to continue, save perhaps in sparsely peopled and comparatively wide tracts outside the populous districts of the Bengal plains.

3. In regard to the adoption of any system of absolute local option in licensing shops, I agree with the view taken by Your Excellency's Government. I consider, however, that the Punjab rule to which your letter refers might be recommended, if not for general adoption, at least to the consideration of all the Provincial Governments, in order that local and municipal opinion, when ascertained or expressed, might be allowed due weight in deciding the number and position of liquor licenses to be issued or continued in any tract or town.

No. 323, dated 15th October 1889.

From—The Government of India,

To—The Secretary of State for India.

We have the honour to acknowledge receipt of Your Lordship's despatch No. 67 (Revenue), dated the 18th July 1889, communicating remarks regarding the outstill system in Bengal, and the advisability of introducing some form of local option in granting licenses for liquor shops.

2. We desire, in the first place, to correct a serious misapprehension as to the extent to which the Bengal Government has already given effect to the recommendations of the Excise Commission. In paragraph 2 of the despatch it is said—

It was decided by the Bengal Government, after reviewing the report of the Excise Commission, to re-establish the central distillery system in all towns, and to regulate more effectually the working of the outstill system. I gather, however, that up to a recent date the central distillery system had been re-introduced into the Howrah and Hooghly districts only.

In paragraph 105 of the Report of the Excise Commission, it was recommended that the central distillery system should be re-introduced into the twelve towns named in the margin; and it was added—

Patna, Gya, Arrah, Chapra, Bettiah, Mozufferpore, Burhampur, Monghyr with Jamalpore, Bhagalpore, Moorshedabad with Berhampore, Burdwan, and Dacca.

The question of establishing central distilleries in several other places was carefully considered by the Commission, but they decided against recommending it.

A reference to the Excise Reports of the Lower Provinces for 1885-86, paragraph 79, and 1886-87, paragraph 83, will show that by 1st April 1887 the central distillery system had been re-introduced in all the places in which the Commission recommended its introduction. It has also been since introduced in Howrah.

We also forward copy of a Resolution, dated the 10th August 1889, recorded by the Government of Bengal on Mr. Buckland's report of his enquiry into the systems of excise in Bombay and Madras. It will be seen from that Resolution that the Lieutenant-Governor has decided to adopt the system of administration which Your Lordship indicates as desirable, and has instructed the Board of Revenue and the Excise Commissioner to endeavour to replace outstills by central distilleries in all places, except where special circumstances, such as those mentioned by Your Lordship, render this inexpedient. We have forwarded a copy of the despatch under reply to the Government of Bengal, who, it will be observed, have decided to proceed much beyond the recommendations of the Excise Commission in the direction of introducing the central distillery system.

3. With reference to paragraph 3 of the despatch, we have the honour to enclose a copy of our circular No. 3686, dated 18th July 1889, regarding the weight to be attached to local and municipal opinion in deciding the number and position of shops licensed for the sale of liquor.

EXCISE ADMINISTRATION OF INDIA.

No. 29 of 1890, dated Calcutta, the 4th February 1890.

From—THE GOVERNMENT OF INDIA,

To—HER MAJESTY'S SECRETARY OF STATE FOR INDIA.

IN our Despatch No. 209 of 6th July last we informed Your Lordship

* "That, in the opinion of this House, the fiscal system of the Government of India leads to the establishment of spirit distilleries, liquor and opium shops in large numbers of places where till recently they never existed, in defiance of Native opinion and the protests of the inhabitants, and that such increased facilities for drinking produce a steadily increasing consumption, and spread misery and ruin among the industrial classes of India, calling for immediate action on the part of the Government of India, with a view to their abatement."

that we proposed to address you, at a future date, on the subject of the Resolution* adopted by the House of Commons condemning in general terms the Excise administration of the Government of India. We have now the honour to fulfil that promise.

2. We are fully impressed with the importance, and indeed necessity, of placing the Excise administration of this country on a satisfactory basis, but, as Your Lordship is aware, serious difficulties are encountered in attempting to establish in India a system or systems of Excise administration which shall be free from objection. These difficulties are, we believe, greater than are met with in any other country which is ruled on principles in accord with modern civilization, and the complexity of the questions involved makes it difficult for those who have no practical experience of the working of the administration to appreciate the obstacles with which we have to contend. Under such circumstances it is a matter for regret that the statements made in the debate on the Indian Excise system should, as it appears to us, have been inaccurate and misleading, and we feel it necessary to reply at some length to the criticisms which have resulted in the condemnation as a whole of the many widely differing and complex Excise systems which are in force in India.

3. With a view to indicating the unsatisfactory nature of the evidence before the House of Commons when the Resolution in question was passed, we have obtained from the several Local Governments authoritative reports regarding the statements made in the course of the Debate, and the correspondence will be found among the enclosures to this Despatch. On our own behalf we desire to add certain explanations and remarks regarding these statements: we

shall take the opportunity of explaining at some length the chief difficulties connected with Excise administration in India, and the methods adopted for overcoming them; and we shall also refer to the principles by which our policy in regard to liquor and drugs is guided, and explain the nature of the measures by which practical effect can be given to that policy. The task of commenting on statements made in the House of Commons is one which we would gladly avoid, but the interests at stake are too important to permit of our evading the duty, however unpleasant. In view of the position of the liquor question in India at the present time, we shall quote freely the evidence on which our conclusions are based.

SECTION I.—STATEMENTS MADE IN THE DEBATE IN THE HOUSE OF COMMONS.

Unfairness of treating the change in system made in Bengal in 1877 (and reversed after 1884), as a fair representation of the results of the Excise policy of the Government of India.

4. In the first place we desire to point out that what took place in Bengal between 1877 and 1884 cannot fairly be taken as an example of the deliberate and settled policy of the Government of India. The defects of the Central Distillery system, which will be mentioned hereafter, led in 1877 and the next few years to its being largely replaced by the Outstill system in that Province; and the Revenue authorities, in January 1879, in consequence of certain difficulties in enforcing it, suspended the rule which had previously been in force limiting the capacity of each outstill, and thus preventing the owner from manufacturing more than a certain quantity of spirit. The latter change was not made under the authority of either the Supreme or Local Government. Complaints followed, which, though exaggerated, were not without foundation, that the change had cheapened the price of liquor and led to an increase of drinking. In this view the number of outstills was steadily reduced from the year 1880, and a Commission was appointed in 1883 to enquire into the whole question.

5. The conclusions of the Commission were accepted by the Local Government and by the Government of India, and the Outstill system was contracted to the extent which the Commission recommended, and its other recommendations regarding the regulation of that system were carried out as quickly as was practicable. These changes were made before the question was discussed in Parliament, and although we admit that an error was committed in so greatly extending the Outstill system after 1877, and especially in removing the limitation on the capacity of outstills, and although we regret that the change was made, we are unable to find in the facts any sufficient support for the assertion that we are indifferent to an increase of drinking on the part of the Indian population, or any reasonable grounds for attacking the general policy of the Government of India in Excise matters.

No evidence to show that there has been an increase of drinking in Bengal since 1884, but evidence to show that there has been a decrease.

6. The remarks of the Government of Bengal in letter No. 2413, dated 28th November 1889, enclosure No. (5) of this Despatch, deal with the charge made by Mr. Smith that there has been an increase of drinking in Bengal within the last few years. The evidence quoted in support of the charge is not of recent date. The Bengal Commission reported in 1884 that up to

that time there had undoubtedly been an increase in the consumption of intoxicating liquor. None of the evidence now brought forward is of a later date than that year. The Bengal Government, after considering and accepting the conclusions of the Commission, immediately proceeded to take steps to carry out its recommendations. There is no evidence to support the charge that drinking has increased in Bengal since the Government of that Province began in 1885 to carry out the Commission's recommendations. On the contrary the evidence supports the opposite conclusion: there has been a decrease in the issues of spirit from central distilleries in Bengal from 1,129,056 gallons in 1886-87 to 1,057,119 gallons in 1888-89, notwithstanding the fact that in the latter year the area covered by the Central Distillery system was greater than in the former year: the issues from outstills cannot be accurately stated, but the number of such stills and the area served by them has been reduced, and the total liquid capacity of all the outstills is little more than one-half what it was in 1886-87.

Opinion of Babu Keshub Chunder Sen, given in 1874, had no reference to recent years.

7. In support of his assertion that "every opinion confirms the astonishing increase in the consumption of spirits within the last few years," Mr. Samuel Smith quoted an extract from a memorial of the late Babu Keshub Chunder Sen, a well-known social and religious reformer. That memorial was forwarded to the Viceroy in January 1874, and was therefore written more than fifteen years before Mr. Smith quoted it to prove an increase of intemperance within the last few years. At the time when that memorial was written, the Outstill system, against which Mr. Smith's criticisms of the Excise administration in India, so far certainly as they apply to Lower Bengal, are mainly directed, was in force in that Province only to a very limited extent.

8. The alleged increase of intemperance to which Babu Keshub Chunder Sen referred was believed to have occurred mainly among the classes who had received an English education: the quotations made in support of his opinion and the general tenor of the memorial confirm this; the writer attributed the increase to two chief causes—"the unsettlement of popular faith and ideas, in consequence of the spread of English education, and the unnecessary multiplication of liquor shops." The Lieutenant-Governor of Bengal, after considering all the evidence forthcoming at that time, recorded his opinion that intemperance was on the increase only among "several sections of the educated classes among the natives at the Presidency Town (Calcutta) and at other large centres of national life."

9. The number of shops for the sale of distilled and fermented liquor in Bengal in each year from 1868-69 to 1874 was as follows:

	Distilleries.	Outstills.	Rum.	Imported liquor.	Tari.	Pachwai.
1868-69	5,820	281	773	865	22,055	1,542
1869-70	5,632	300	776	901	22,329	1,655
1870-71	6,100	312	816	965	21,670	1,667
1871-72	6,153	1,058	773	953	21,689	1,515
1872-73	5,040	1,075	210	944	22,351	1,444
1873-74	4,723	1,076	122	891	22,873	2,006

Pachwai is a comparatively harmless home-brewed beer, and the figures just

given do not support the contention that any increase of drinking that may have taken place in the years preceding 1874 could, in any appreciable degree, be ascribed to "the unnecessary multiplication of liquor shops." We have no doubt that the other reason assigned for increase of drinking, namely, the unsettlement of popular ideas and faith, in consequence of the spread of English education, was correct, though we believe that the amount of increase and of evil resulting from it was exaggerated. Babu Keshub Chunder Sen saw, and deplored, this increase of drinking among that class of his countrymen to which he himself belonged, and in his desire for reform he urged that the number of liquor shops should be reduced; in point of fact any increase in the habit of drinking that may have taken place among certain classes at that time was not due to an excessive number of shops, and would not have been stopped by their reduction.

Temporary increase of drinking sometimes due to spread of English education.

10. One of the earlier effects of the spread of education and enlightenment in such countries as India may sometimes be an increase in intemperance: old checks based on imaginary sanctions lose their power of restraint, and the result is excess. But this result is, we believe, only temporary: education in time establishes more solid and enduring restraints against intemperance than those which it destroys. The gradual growth of a healthy public opinion will, in our opinion, reduce intemperance in a wider, surer, and more lasting manner than the most severe restrictive measures which Government could adopt. It seems to us better to await with confidence this result of education and to assist in the formation of sound public feeling than to be hurried by alarm at a temporary evil into hasty attempts at forcible repression. A change of this nature in public opinion has occurred in the present century among large classes of the people of Great Britain: habits of intemperance which formerly prevailed among certain classes in England without disgrace are now condemned as disgraceful. We are glad to think that enlightened public opinion has already begun to work in the direction of sobriety and moderation among the class of educated Natives of Bengal to whom Babu Keshub Chunder Sen's remarks applied, and we quote with satisfaction the following extract from the evidence of Mr. Romesh Chunder Dutt, Magistrate and Collector of Backergunge, a Member of the Bengal Civil Service, given to the Bengal Excise Commission in 1883:—

"I wish to make a few general remarks about drinking among respectable and educated men. It is a mistake to say, as is often said, that English education has introduced drink in India. Drink was well known in ancient India, and we know enough of the facts of the last century to be able to assert that drinking was a fashionable vice among the courtiers and retainers of princely zemindars. Devout Shaktas worshippers have also been partial to drink for many centuries in Bengal, and semi-aboriginal castes have always been addicted to drink. There can be no doubt, however, that with the introduction of English education in Bengal in the early part of this century a sort of impetus was given to drinking among the higher classes. Educated men who broke through the prejudices against forbidden food disregarded at the same time the salutary restraint against drink. Drinking was regarded as a sort of index to liberal ideas and reformed ways—as a commendable accomplishment in an educated gentleman. When there is a reaction against ancient prejudices and senseless social restraints it is difficult to confine it within the exact and proper bounds, and the first distinguished men from the Hindu College, who took part in all the commendable political and educational reforms a generation or two ago, were generally men who were not admired for their sober habits in private life. The example of these distinguished men was of course followed by a large circle of educated men in Calcutta."

"I have noticed with pleasure a salutary change in Calcutta society within the last 20 years or less. A closer knowledge of English society, derived from a more careful study as well as by the frequent visits of our young men to Europe, has convinced our educated countrymen that drinking is not a necessary accomplishment in English society, and that drunkenness is simply not tolerated. The public men of the present generation, who take a lead in most political and social agitations, and whom the great majority of educated men almost instinctively follow to some extent, are setting a commendable example of temperance, which is different from the example which was set 30 years ago. The thousands of school-boys who flock to public places to listen to the speeches of their leaders in political and social matters are intimately acquainted with their habits and thoughts in private life, and instinctively adopt many worthy and amiable traits in their conduct. I believe I am right in stating that drunkenness is decreasing among the higher and better educated classes in Calcutta, and the example set in Calcutta spreads rapidly among the similar classes in all mofussil towns.

"I have made the foregoing remarks in order to show that drinking among the educated classes has nothing whatever to do with the Outstill system, and that it depends entirely on other influences on which Excise legislation has no control."

Evidence of Mr. Metcalfe.

11. Mr. Smith also quoted the evidence of Mr. Metcalfe, Additional Commissioner of Patna, before the Bengal Excise Commission, to show that intemperance had increased in Bengal in consequence of the re-introduction of the Outstill system. The passage quoted from Mr. Metcalfe's evidence was as follows:—

"I have been officially connected with this district since 1879 to 1884 as Collector and from 1874 to 1876 as Officiating Commissioner.

"My experience has been as a Collector both of the Sudder Distillery and Outstill systems.

"The habit of drinking has extended to all classes. The quantity drunk is larger owing to the cheaper price at which it is now sold. Persons who previously were satisfied with a dram are now able to afford a bottle or two.

"Among the labouring and artizan classes drinking has increased to a deplorable extent. I have not noticed any cases among school-boys, but my experience is that domestic servants, day-labourers, and women drink to an extent I never noticed before under the Distillery system. Under the Outstill system the habit of drinking is forcibly brought home by instances such as these. My coachman has tumbled off his box drunk. If I want a moosie to mend the harness, I have to arrange that he shall be sober the night before. A workman now drinks his bottle of spirit as regularly as he eats his food, and quarrels have become frequent."

Mr. Metcalfe was an officer of long service and wide experience, having first arrived in India in the year 1857, and he was the highest official but one in Behar. His evidence is justly entitled to weight. But the Commission also took the evidence of Mr. F. M. Halliday, the only officer in Behar of higher rank than Mr. Metcalfe, and of at least equal experience, as he came to India in 1856. Mr. Halliday's evidence is printed in Appendix A and by no means supports the extreme statements made by Mr. Metcalfe.

We are not aware of any good reason why the evidence of Mr. Metcalfe should be held to be conclusive, while that of Mr. Halliday is ignored.

Evidence of Mr. Hudson.

12. The following passage was also quoted by Mr. Smith from the evidence of Mr. Hudson before the Bengal Commission:—

"The upshot of the enquiries I have made among the planters and my personal observations during a residence of 20 years is that drunkenness has greatly increased during the last few years. I attribute this principally to the fact that 20 years ago, and up to a few years past, it cost a man four annas to get drunk on spirits; now he can make himself dead drunk—*chik miss* as it has been expressed to me by a 'habitual,'—for one anna. Also, whereas it used to be most difficult to get spirits anywhere except at the distilleries, it can now be procured within reach of nearly every hamlet."

We have no doubt that Mr. Hudson gave his evidence in perfect good faith and fully believed everything he stated to be true. But while we admit that there was an increase of drinking at the time to which his evidence refers, though not due solely to the cheaper rate at which liquor could be procured, we are of opinion that a very exaggerated view of the increase was taken by him, and in so far as it is possible to test it by figures, his evidence is not borne out by facts. For example, it is not the case that it used to be most difficult to obtain spirits anywhere except at the distilleries. Liquor is never sold from the central distilleries, but from the shops supplied by these distilleries; and the number of shops in any area under the Central Distillery system is usually greater than when the same area is brought under the Outstill system. In Chumparun, the district with which Mr. Hudson was best acquainted, the number of liquor shops in 1883 was 135. The population of that district was 1,721,608 according to the census of 1881 and the number of villages and hamlets contained in it was 7,762. There was therefore only one shop to 58 villages* and hamlets, and to 12,750 of the population. If we consider the adjoining district of Mozufferpur, with which Mr. Hudson, as an indigo planter, was no doubt well acquainted, we find the number of liquor shops to have been 134, the population 2,582,062, and the number of villages* and hamlets 5,138. There was thus in Mozufferpur one liquor shop to 38 villages and hamlets, and one liquor shop to a population of 19,270. We are unable to see how, under these circumstances, it could be said that liquor was procurable within reach of nearly every hamlet. The districts of Chumparun and Mozufferpur are comprised in the Division of Behar, and the number of shops for the sale of country liquor in that Division was 2,246 in 1871-72, 1,773 in 1880-81, and 1,417 in 1881-82, while it has never exceeded 1,079 since 1882-83.

13. The evidence of another non-official witness, Mr. H. W. Stevens, by no means bears out the statements of Mr. Metcalfe and Mr. Hudson, though he was intimately acquainted with the tracts of country with which these gentlemen were familiar. His evidence was as follows :—

"I am very well acquainted with the districts of Monghyr, Bhagulpore, Durbhanga, and Mozufferpore. I have been resident in these districts and constantly moving about for the last 20 years. During that time I was constantly employed on various public works, and have had very large gangs of labourers of various descriptions under me.

"I know so far about the working of the Sudder Distillery and Outstill systems that there were more supervision and restriction in the former than in the latter.

"I have no reason to suppose that drinking has increased in the above districts during the last ten years, but I do consider that the location of outstills in prominent localities in the neighbourhood of indigo factories and bazars has made drunkenness more apparent.

"I have never known drinking among school-boys. I think there has been an increase of drinking among domestic servants. I judge from my own servants, more especially among eyces and outdoor servants, than among the indoor servants. It seems to be more in the districts north of the Ganges than in Monghyr and South Bhagulpore. I do not think that the pure agriculturists drink at all. Day-labourers much prefer tari when they can get it. When they cannot, they drink country spirits. On my quarries near here there are several hundred people employed. There is no difficulty caused by these people getting drunk, and no complaint on the subject. There is no liquor-shop at any of these quarries. There may be liquor-shops in the adjoining villages for all I know. These people, like all other low-caste labourers, get drunk at the Holi and other festivals. I do not believe that the

* Places with a population of 5,000 or more have been taken as towns: there are 16 such in Mozufferpur and 4 in Chumparun. In calculating the number of villages to each shop, we have not struck out the shops in these towns, as the Excise Reports do not show them separately. If it had been possible to do this the results would have been even more unfavourable to Mr. Hudson's allegation.

drunken bouts on these occasions last longer now than they did formerly. I have never seen a drunken woman.

"From my own experience I should say that no caste which did not drink while the Sudder Distillery system was in force has now acquired the habit of drinking. I consider that the increase in drunkenness which I observed among the domestic servants is wholly due to increase of wages. Sycees' wages have risen to 50 per cent. during the last 20 years, and the price of food in normal years has not increased.

"The last five years previous to the present one have been years of prosperity in the districts above mentioned; and if there has been any increase in the consumption of liquor in these years it has been mainly attributable to that prosperity.

"There has been a very marked increase during the last four or five years in the expenditure on the marriages of the labouring classes; such expenditure has materially increased the consumption of liquor. Country spirit, and not tari, is mainly drunk on these occasions."

Danger of accepting extreme statements made by particular witnesses in questions connected with drink.

14. In referring to the evidence of Mr. Metcalfe and Mr. Halliday, and of Mr. Hudson and Mr. Stevens, we desire to call attention to the danger of taking isolated portions of evidence, or the evidence of particular persons, as conclusive. India is so vast that nobody can possess a thorough knowledge of more than a comparatively small portion of it; and any one who makes general assertions on the strength of a few instances which have come to his own notice is liable to fall into serious error. There is a special reason for accepting with caution extreme statements made with reference to a question like that of the traffic in drink. Men's minds are in that matter greatly influenced by sentimental considerations, and there is a risk of the judgment being misled by preconceived ideas, especially when statistics are not employed to test loosely-formed opinions. The Bengal Excise Commission made the following remarks in connection with this matter:—

"When a person testifies from his own experience to an increase of drinking among the people of his own village, or among his workpeople, or among any set of people with whom he has had close and intimate relations, and to the extent of such increase, the statement, if made by a competent and unprejudiced observer, may be implicitly relied on; but it is impossible to attach the same weight to a very large number of the statements to be found in the evidence taken by the Commission. A striking instance of this will be found in the evidence taken at Jamalpore, in the Monghyr district, by one of the members of the Commission. Statements were then made, undoubtedly in good faith, by several of the officials employed in the Railway workshops, which statements were afterwards contradicted or seriously modified in an authoritative way."

15. We have no doubt that both Mr. Halliday and Mr. Metcalfe, Mr. Hudson and Mr. Stevens, though differing widely in their evidence, merely gave expression to their genuine convictions. The evidence of these four gentlemen referred to the same portion of India, namely, Behar. Of the two official witnesses, Messrs. Halliday and Metcalfe, it may fairly be said that their experience was equally great. The same remark applies to the non-official witnesses, Messrs. Hudson and Stevens. Stronger evidence could hardly be produced of the danger of relying on the mere opinions of individual witnesses. It is unnecessary to pursue the matter farther, as the conflicting evidence refers to a state of things which, as we have already said, ceased to exist some years ago.

Alleged increase in the number of drunkards.

16. When definite statements such as those relating to the increase in numbers of liquor-shops or the sale of liquor at almost every hamlet are made.

we can at least test their accuracy if we cannot disprove them. But general and indefinite assertions are more difficult to meet. Of this class is the assertion of Mr. Smith that, "whereas ten years ago there were perhaps 10,000,000 of drinkers in India, we have now turned them into 20,000,000." Regarding this statement we must content ourselves with remarking that the figures are, both absolutely and relatively, purely imaginary, rest on no basis of statistics or accurate observation, cannot be tested in any way, and that it would probably be as correct to say that whereas ten years ago there were 20,000,000 of drunkards in India, their numbers have now been reduced to 10,000,000. We entirely disbelieve that the number of drunkards in British India, using the term drunkards in its ordinary acceptance, at all approaches the enormous total of 20,000,000. There has probably been some increase of drinking among the classes that have come under the influence of Western thought, and among those members of the lower classes who have been brought together in large bodies to work in factories and on railways, and who receive much higher wages than formerly, but these classes are after all only a fraction of the total population, and a stricter system of Excise and higher rates of duty have, as the Bombay Government observes, "exercised a most salutary effect in preventing the general drunkenness that formerly prevailed among the lower classes in certain districts." The same Government adds: "The change that has come over the notoriously drunken population of the Thana and Kolaba Collectorate since 1878 is remarkable."

We think it quite possible that the total number of drunkards in India has decreased in recent years, though, of course, an increase of drinking among the numerically small portion of the population in the Presidency towns that has received an English education attracts much more attention than a corresponding decrease among the lower, and more numerous, classes in remote districts.

Alleged untrustworthiness of Official evidence.

17. Mr. Smith also asserted that as regards Excise matters "the officials are tied to the system, and we can place no more reliance upon their opinions than on the question of the abolition of slavery we could have followed the advice of West India Planters as to the moral effects of the system." With reference to this charge we desire to observe that the officials in India have no pecuniary interest of any kind in encouraging drinking; and that the position of officials in this matter differs, *totò casò*, from that of the slave-owners who had a personal pecuniary interest in the continuance of the institution of slavery. Even the Local Governments, who are charged with the administration of the Excise Department, have a comparatively small pecuniary interest in the increase of Excise revenue, of which Provincial revenues now receive only one-fourth, the remainder going to the Government of India. The inapplicability of the comparison instituted by Mr. Smith is proved by another portion of his own statement. One of the strongest of the quotations made by him in support of his case was from the evidence of an official, Mr. Metcalfe. It is given in paragraph 11 of this Despatch. Another official, Mr. O. C. Stevens, Magistrate and Collector of the 24-Pergunnahs, stated in evidence before the Commission his belief from the information he could obtain that "drinking had increased among all the classes named in the questions circulated by the Commission except school-boys;" and he strongly condemned the Outstill system, and recommended the re-introduction of the

Central Distillery system in all but exceptional tracts where the circumstances are such as to render it impossible to work it. We need not multiply instances in which Government officials have recorded opinions against the system with which the pecuniary interests of the Government were supposed to be bound up. But we may state that of the 104 official witnesses examined by the Bengal Excise Commission, 56 gave evidence that drinking had increased under the Outstill system: most of these were of opinion that the increase was due partly or chiefly to the Outstill system: some of them recommended reversion to the Central Distillery system, others the better regulation of Outstills, while others did not propose any remedy for the evil. Even among those who did not believe that there had been an increase of drinking, some recommended on other grounds that Outstills should be displaced by Central Distilleries. We think that these figures disprove the assertion that our officers can no more be trusted in matters of Excise than could slave-owners in questions connected with slavery.

Alleged failure to carry out the recommendations of the Bengal Commission.

18. Mr. Smith also said: "Now, the Bengal Commission reported in favour of a reversal of the Outstill policy, and an attempt at reversal was made for a year or two; but as the revenue straightway fell off by ten lakhs the Government did not like it, and they gradually reverted to the old system." In this matter Mr. Smith has been misinformed. Since the Report of the Commission of 1883-84 was considered, the Bengal Government has been engaged in carrying out the recommendations of the Commission, as a reference to the yearly Excise Reports would have shown. Long before the date on which Mr. Smith made this statement the Central Distillery had been introduced in supersession of the Outstill system in every one of the places for which the Commission recommended this step, and the measures suggested by the Commission for the better control and regulations of outstills in places in which they considered that these should be maintained were being steadily brought into force. We desire to call special attention to this point, because Mr. Smith's confident assertions as to the Government having failed to carry out the recommendations of the Commission and the motive for its action being a desire to obtain revenue appear to have misled Your Lordship, and in Your Lordship's Despatch No. 67, dated 18th July 1889, it was assumed that the Government of Bengal had wavered in its expressed intention to carry out the recommendations of the Excise Commission in regard to the substitution of central distilleries for outstills, and a hope was expressed that the rate of reform in Bengal would be materially accelerated. The real facts of the case are fully explained in the Bengal letter No. E³⁴ 13, dated 28th November 1889, enclosure No. (5) of this Despatch, and they have already been referred to above in paragraph 5. The Bengal Government is now going much beyond the recommendations of the Commission in the direction of abolishing the Outstill system. It is probable that Mr. Smith's misconception was due to the extension of the Outstill system in 1887-88 to a portion of the Hooghly-cum-Howrah district. This measure arose out of a recommendation of the Excise Commission, that two Central Distilleries in that district should be closed and that the location of a third should be changed. After careful inquiry, and in consideration of the fact that there was strong evidence of smuggling in the tracts affected, the extension of the Outstill system was held to be preferable. The results of this change were investigated very fully in 1888, by an officer, Mr. Westmacott, placed on special

duty for the purpose. The final result was that from 1st April 1889 the Outstill system was again abolished in that district.

19. Apart from the question of the general inaccuracy of Mr. Smith's assertion regarding the action of the Bengal Government, the figures of the Excise Revenue show that there was not a decrease of ten lakhs which could by any possibility be due to the adoption of the recommendations of the Excise Commission. The Excise Receipts in Lower Bengal were in—

	Rx.
1883-84	1,042,539
1884-85	1,005,222
1885-86	958,469
1886-87	1,012,588

The Report of the Commission was laid before the Government of Bengal in September 1884. Orders were issued in the following month to carry out some of the recommendations; but as the contracts for the year had been made in the previous March, effect could not be given to those orders till the following year; and the first steps in the direction of substituting Central Distilleries for Outstills had effect from 1st April 1885. Consequently the decrease of revenue of the year 1884-85 as compared with 1883-84 had no connection with the adoption of the recommendations of the Commission. The decrease in 1885-86 was Rx. 46,753, or less than five lakhs. In 1886-87 the revenue again rose above the figure of either of the two previous years, although in that year Central Distilleries were substituted for Outstills in some more districts.

Assertion that there is no risk of illicit distillation.

20. The supporters of the Resolution adopted by the House of Commons attempted to minimise the risk of illicit distillation in India. Mr. Smith remarked that illicit drinking was "a mere bugbear, an excuse to salve the consciences of the British people, an easy way to throw dust in the eyes of inquirers;" and Sir William Harcourt remarked that "illicit distillation generally exists where the sympathy of the people is with drink, and not where it is against it." The following extracts throw light on this portion of the question:—

Extract from a memorandum by the Chief Commissioner of Assam.

"The preparation of rice-beer presents no more difficulty than the infusion of a pot of tea, and has this additional facility that, whereas tea, under the circumstances in which we most know it, is an imported product, which has to be purchased, rice is the staple food of the country, and, being cultivated and stored in large quantities, every Kachari and every Miri has it always at hand. The mode of preparation is to steep rice in water for two or three days, then boil it with certain herbs, which act as a yeast, and the result is beer. It is rarely sold; each person manufacturing his own supply, and borrowing from his neighbour if he falls short."

"Pachwai is manufactured so simply that the process is only a little more complicated than the preparation of rice for ordinary meals or the brewing of a pot of tea."

"It should be noted that the rice-beer is sometimes made to undergo a further process of distillation, and the distillate is called phatika. It is almost as cheaply and simply made as the rice-beer itself: take two earthenware pots; in one of them put the rice-beer, and on the top of it stand the other pot, first knocking a hole in the bottom of it. Stand a saucer on the bottom of the higher pot, and stop the mouth of this pot with a vessel made in the shape of an inverted cone and filled with cold water. Now set the whole thing on a fire. The fumes rise, through the hole, into the upper jar, are condensed against the cold inverted cone, and drop into the saucer in the form of spirits."

"If people want to obtain spirits, they can do so either by getting smuggled spirit from the hills, or by brewing and distilling for themselves by methods with which they are quite familiar, and which are very cheaply and easily available."

Extract from a Minute forwarded by the Government of Bombay.

"When licit markets for toddy were opened in all directions, and tappers were allowed to take or send their toddy to any shop or distillery they pleased, the transport regulations broke down, and any one who wanted toddy for illicit distillation was able to carry it where he pleased on the plea that he was conveying it to some shop or distillery. How greatly the facilities for illicit distillation were thus increased will be understood when it is remembered that any pot of fermented toddy can be converted into a ready-charged still, and that distillation can be set going anywhere within the space of less than five minutes. All the apparatus necessary, besides the pot of toddy, is an earthen saucer and a little wet earth with which to close tightly the mouth of the pot, and a small bowl to be placed floating on the surface of the toddy in the pot. If a pot of fermented toddy thus treated is set to boil, and the saucer closing its mouth is kept cool by pouring water on it, the spirit given off from the boiling toddy in the shape of steam is condensed on the under-side of the saucer, and drips from the saucer into the bowl floating on the toddy ready to receive it. Two or three bottles of strong spirit can thus be made in a couple of hours from an ordinary sized pot of toddy. Distillation of this kind can be carried on anywhere, in the houses, or in the fields, or in the jungles; wood and water are plentiful in all these coast talukas. It was the custom of the whole country-side to make toddy spirit in this primitive fashion before reforms were taken in hand in 1887-78. In those days such stills were in almost daily use in every village and hamlet of the toddy-producing tracts."

Other passages bearing on this question are quoted in paragraph 70 (4) of this Despatch and in Appendix C. Passages to the same effect will also be found in Appendix L. The extracts quoted at the end of Appendix C show how prevalent illicit distillation is in the Punjab, a province in which the rates of duty are specially high. We would also refer to the experiment in Thana and Kolaba, described in the memorandum printed in Appendix E, as an instance in which the prevalence of illicit distillation, immediately following on an attempted increase in the rates of duty, led to a complete breakdown of the system.

21. There is no room for doubt that illicit distillation prevails in many parts of India, that it is easily carried on, and difficult to detect. The tendency to illicit distillation forms a very real and, at a certain point, an insurmountable obstacle in the way of raising the price of liquor by imposing a heavy duty on it. In some places, the sympathy of the people is distinctly on the side of illicit distillation, and we are not aware of a single instance in which zeal for the cause of temperance has led to the discovery of unlawful practices. In such a matter experience is a safer guide than theory. The Bengal Excise Commission was composed of two Natives of India and two Europeans who had spent the greater portion of their lives in Bengal, and who were intimately acquainted with the country. They visited 27 Bengal districts; personally inspected 216 Outstills and 9 Central Distilleries; and examined 320 witnesses either orally or by written questions. They had no other duties to perform, and though their inquiry began in November 1883 they did not finish their labours till August 1884. Their report and the record of the evidence and proceedings fill two bulky volumes aggregating 643 quarto pages of closely printed matter. The inquiry and report may fairly be characterized as exhaustive, and we have never heard that the perfect fairness of the inquiry or the impartiality of the members of the Commission has been impugned. One of the members was Babu Krishna Behari Sen, a brother of Babu Keshub Chunder Sen, referred to in paragraph 7 of this Despatch, himself also a zealous social reformer. On the question of the sympathy of the people with illicit distillation this Commission reported unanimously in the following terms:—

"But, as a general rule, illicit spirit was distilled in small quantities and in the inner rooms of the houses or in the jungles. In the latter case, detection could only be the result of

accident. In the former, no matter how active detective officers may be, they can do little unless they are supported by the fellow-villagers of the offenders; but it is notorious that excisemen cannot look for such support or aid. The sympathy of the people is entirely with the illicit distiller and the smuggler, who, as one of the witnesses expressed it, is always sure of his safety, impunity, and the friendship of his neighbours. He is sure that his neighbours will not betray him; and in case he is spotted by an outsider, the neighbours will never turn evidence against him."

Alleged statements of Mr. Lallubhai Gordhandas.

22. In connection with the question of illicit distillation Mr. Caine quoted the authority of an official who is intimately acquainted with the Excise administration of Bombay. Mr. Caine said:—

"Sir David Barbour is wisely silent with regard to Bombay. I will not be silent. While I was in Bombay I had a visit from Lallubhai Gordhandas, General Assistant in the Abkari Department. I had a long conversation with that gentleman. I made careful notes of it and read them over to him with some care, and he admitted that they accurately represented what he said. His statements were (I quote from my notes): 'Throughout the Presidency there is no illicit distillation whatever for sale. There may be a little prevalent where there are many toddy or mowra trees, for private consumption only. We have got Mr. Pritchard's system well in hand, and illicit distillation is now reduced to a minimum.'"

23. The statement of the official named, with reference to this remark, will be found among the enclosures of the letter from the Government of Bombay, enclosure No. (6) of this Despatch. From that statement it will be seen that Mr. Caine misunderstood what Mr. Lallubhai Gordhandas said: Mr. Lallubhai Gordhandas denies having used the words attributed to him by Mr. Caine regarding illicit distillation: the words he did use bear a very different meaning. Mr. Caine's memory has apparently also deceived him in leading him to say that he showed the notes of the conversation to Mr. Lallubhai Gordhandas, and that the latter admitted that the notes accurately represented what he had said. Mr. Lallubhai explicitly contradicts these assertions. The other enclosures of the Bombay letter furnish abundant proof of the incorrectness of the assertion that "throughout the" (Bombay) "Presidency there is no illicit distillation whatever for sale." Mr. Caine does not appear to have mentioned that Mr. Lallubhai Gordhandas told him that "the charge against the collectors" (of stimulating consumption by opening new shops) "was entirely groundless and opposed to facts"; "that his own observations and enquiry during his recent tours in Gujarat had inclined him to the opinion that, under the operation of the new abkari system and administration, the habit of liquor-drinking was unquestionably decreasing among the poorer classes and semi-wild tribes," and that he strongly cautioned Mr. Caine "against the fallacy of drawing general conclusions from isolated facts." Mr. Lallubhai Gordhandas's fairness, in the opinion he formed about an increase or decrease in the habit of drinking, is shown by his having stated that "indications of an extension of that habit among some of the middle and upper classes were perceptible," adding "that for this increase the Abkari Department was in no way responsible."

Fallacy of arguments based on increase of revenue in recent years.

24. Throughout the Debate there are frequent references to the increase of Excise Revenue in India in recent years as affording evidence of an increase of consumption. This question also was considered by the Bengal Excise Commission which remarked as follows:—

"Conclusions regarding the increase in the number of consumers drawn from revenue statistics are equally misleading. An increase in revenue in any given district or part of a

district does not necessarily indicate increase either in the amount of spirit consumed or in the number of consumers; and in like manner a decrease in the revenue does not prove that consumption is decreasing. Any improvement in the administration which leads to the taxation of spirit previously consumed free of duty must cause a corresponding increase of revenue without any necessary increase of consumption. Thus since the duty, which, as has been shown, in a previous section, used to be divided between the darogahs and the distillers, has been recovered by the Government, there has been an increase in the revenue to the extent of the previous frauds, but no increase in consumption. On the other hand, there has been an undoubted and most serious increase in the consumption of spirit of recent years in some places, such as the urban parts of the Patna and Monghyr districts, where the revenue has actually decreased in spite of the increased consumption.

"A consideration of facts like these has convinced the Commission that it would not be safe to accept the revenue figures by themselves as the basis of any calculation."

25. The facts connected with the consumption of ganja in Bengal afford a striking illustration of the danger of assuming that an increase of revenue can safely be taken as proof that consumption has increased. We quote the following passage from the Financial Statement for 1889-90:—

"The following statement shows the number of shops licensed for the sale of ganja, the quantity of ganja consumed, the total revenue, and the incidence of taxation per seer for every year from 1868-69 to 1887-88:—

Year.	Number of shops.	Consumption in maunds.	Total revenue.	Taxation per seer.
			Rx.	R
1868-69	4,079	8,442	89,524	2.6
1869-70	4,437	8,867	92,521	2.6
1870-71	4,749	9,653	103,251	2.6
1871-72	4,934	9,973	106,275	2.6
1872-73	4,694	8,593	110,028	2.7
1873-74	4,398	8,125	107,785	2.8
1874-75	4,394	7,830	105,818	2.3
1875-76	3,340	7,389	112,035	3.7
1876-77	3,130	7,458	119,711	4.0
1877-78	3,247	8,197	138,566	4.2
1878-79	3,244	5,460	134,555	6.1
1879-80	3,210	5,137	129,116	6.2
1880-81	3,411	5,000	145,467	6.4
1881-82	3,386	6,431	171,379	6.6
1882-83	3,271	5,846	186,050	8.2
1883-84	3,298	5,891	197,371	8.3
1884-85	3,196	5,798	198,760	9.0
1885-86	3,033	5,717	194,002	8.5
1886-87	3,046	6,264	207,587	8.9
1887-88	2,949	6,550	224,407	8.5

"Notwithstanding the large increase of population which must have taken place between 1868-69 and 1887-88, the number of shops for the sale of ganja has decreased by more than 27 per cent., and the consumption by more than 22 per cent., while simultaneously the revenue has increased by more than 150 per cent., and the incidence of taxation per seer has increased by more than 2.26 per cent."

26. In the period during which the Excise Revenue has increased there

has been a large increase in other branches of revenue. For example, the Stamp Revenue has increased between 1871-72 and 1888-89 from Rx. 2,476,833 to Rx. 3,927,088, or by about 59 per cent. The increase of Excise Revenue (including for the present purpose the receipts from the duty on imported wine, spirits, and beer), is much greater, being from Rx. 2,605,227 to Rx. 5,253,629, or by about 101 per cent. But the Excise Revenue has increased, not merely by ordinary growth, but also owing to the adoption of stricter systems and the steady raising of the rate of duty whenever it was possible to do so. The duty on imported spirits during the period in question has been raised from Rs per gallon L. P. to Rs 5 L. P., or by 66 per cent, and in Appendix F will be found a statement showing the increases in the rates of duty on country spirit in recent years: the figures there given show that there has been a steadily increasing use of the form of discouragement of drinking which effects its object by increasing the duty and thus raising the price of liquor. The only exceptions are in the case of the North-Western Provinces and Oudh, where it was found necessary to reduce the high rates introduced experimentally on the first introduction of the Central Distillery system in 1860-63.

27. A large portion of the increase which has occurred in the Excise Revenue is due to the general prosperity which India has enjoyed for many years. The wage-earning classes have obtained more regular employment on the large works which have been constructed in the last thirty years, and their wages have in many cases been materially increased: the construction of Railways has improved the condition of the lower classes in most parts of India, and they have consequently been in a better position to indulge their taste for drink than they formerly were. It is these classes that chiefly consume country liquor; and in India, as in England, an increase of the Excise Revenue in any year is an indication that the year has been a prosperous one. The following extract from a statement by the Dewan of Mysore will show that similar causes are producing similar results in that State:—

"Excluding, therefore, this increase from consideration, we still find a further and considerable increase common to both arrack and toddy, which we can only attribute to increased consumption. In my opinion, it is the result of prosperous seasons and good crops and of the very great rise in the wages of labour which has taken place within the last few years. With extensive railway works between Gubbi and Harihar, with the large expansion of the gold industry in Kolar, and with public works of all kinds employing large numbers of coolies in every part of the province, the demand for labour has for some time past been far in excess of the supply, and led to the importation of a large miscellaneous class of labourers from outside the province. The high wages earned by labourers of this class, as well as by those of the province, account in my opinion for a great part of the increased consumption of both arrack and toddy."

28. In this connection we desire to refer to the import of spirits into India by sea, the increase in which was alluded to in the Debate as part of the indictment against the policy of the Government of India. In respect of this portion of the liquor traffic no accusation of stimulating consumption by the Outstill or Farming system, or by imposing a minimum guarantee, can be brought against any Province, for no such system is, or ever has been, applied in the case of imported liquor. Such liquor is practically dealt with in the same way as liquor in England, except that the number of shops is very limited. The consumption of imported liquor could therefore only have been stimulated by reducing the rate of duty. The rate of duty has not been reduced, but has, on the contrary, been increased twice within the last twenty years.

29. We give below a table showing the imports of spirit for each year since 1870, the rate of duty per gallon, and the amount of duty realised:—

Importation of Spirits into British India by Sea from Foreign Countries.

During	Quantity.	Amount of Customs duty realised.	Rate of duty per gallon of London proof.
	Gallons.	Rx.	Rs.
1870-71	461,823	164,309	3
1871-72	671,026	167,417	
1872-73	723,609	184,068	
1873-74	608,824	193,261	
1874-75	674,967	215,240	
1875-76	704,874	225,667	4
1876-77	654,527	255,128	
1877-78	737,714	275,983	
1878-79	692,384	286,847	
1879-80	814,334	321,846	
1880-81	848,238	307,903	5
1881-82	842,739	337,497	
1882-83	949,169	353,624	
1883-84	894,420	355,210	
1884-85	857,970	344,893	
1885-86	936,984	368,075	5
1886-87	1,064,386	429,708	
1887-88	1,084,487	462,936	
1888-89	1,119,367	482,854	

30. It will be seen that in 18 years the rate of duty has been increased by 66 per cent., and that, nevertheless, the quantity consumed has increased by 142 per cent and the revenue by 161 per cent. The fact that the rate of increase of revenue is not proportionate to the increase in quantity and in duty is an indication that the spirits now imported contain on an average less alcohol per gallon than in former years. In quantity of pure alcohol imported the increase is about 50 per cent. The increase of the Excise Revenue proper, i.e., excluding the duty on imported wines, spirits, and beer, between 1870-71 and 1888-89 has been from Rx. 2,374,465 to Rx. 4,705,343, or an increase of 98 per cent., against one of 161 per cent. in the case of imported spirit.

31. The figures we have just given show clearly that an increase in the revenue derived from excise or even in the quantity of liquor consumed does not necessarily indicate any relaxation of the restriction on the liquor trade. We have adopted what is admitted to be the most efficacious means of restricting the consumption of imported spirits by imposing a high duty and raising the rate from time to time. The imports have, nevertheless, increased; and the increase has been greater, proportionately, than that of the Excise Revenue proper. We believe that a portion of this increase is due to the higher rates of duty gradually imposed on spirit manufactured in the country which have made it possible for imported spirit to compete in some places with country spirit. If we are correct in this conclusion, there cannot have been any stimulus of the sale of country spirit by reducing the cost at which it may be procured. But apart from that, the point we wish to bring out is that the fact of an increase having taken place in a similar branch of revenue where we have admittedly adopted the best possible means of restricting consumption is sufficient to show that a mere increase in the Excise revenue is not a ground for condemning our Excise administration.

Mr. Caine's statement regarding the increase of consumption of liquor in Bombay.

32. After the passage in his speech quoted in paragraph 22, Mr. Caine proceeded as follows :—

"The system has now been in good working order for ten years, and what are the results? In 1882 the consumption of ardent spirits in the Bombay Presidency was two millions of gallons, and in 1886 it had risen to 2,750,000 gallons, these being the latest available figures. There was thus a net increase of 40 per cent. in four years, which means that it would double itself in ten years. We are asked to believe that this increase is due to the change from illicit to licit consumption."

A reference to paragraphs 8 to 16 of the memorandum of the Commissioner of Abkari, appended to the Bombay Government's letter of 6th December, will show that Mr. Caine has exaggerated the increase of consumption of liquor in the period he deals with. His figures do not represent the consumption of ardent spirits in the Bombay Presidency either in 1882 or in 1886. He has, apparently—his figures cannot be traced in the Excise Reports—, compared the consumption of a smaller number of districts at the beginning of the period with that of a large number at the end of it, and thence deduces an increase in consumption of 40 per cent. in four years. It is shown in the memorandum mentioned that, if figures which are rightly comparable are taken, the increase was 10 per cent. only: and it is claimed that of this the larger portion was due to the measures which had reduced smuggling from Native States and illicit distillation. We do not charge Mr. Caine with intentional misrepresentation: his mistake was no doubt made in ignorance, and was due to his imperfect acquaintance with the facts; but we would strongly urge that statements of this sort made in Parliament, where they cannot be contradicted at the time, should not be accepted as evidence sufficient to justify what is practically a vote of censure on the Excise administration of the Government of India.

Mr. Caine's statements in regard to the Revenue from Foreign liquor in Bombay.

33. Mr. Caine next gave figures showing the increase in revenue in the Bombay Presidency from (1) foreign liquors, (2) country spirits, and (3) drugs: he quoted average figures for the five years ending in 1877 and in 1882 and the figures of each year from 1883 to 1888.

The figures given for foreign liquors by Mr. Caine represent merely the fees payable on account of licenses for the retail sale of such liquors, and not the duty, and have only the most remote connection with the quantity of liquor consumed; with this important qualification, the figures are correct. But the increase of Rs. 1,600 in the five years ending 1882, as compared with those ending 1877, is almost entirely accounted for by the fact that in the earlier period the receipts in the city of Bombay averaging Rs. 1,300 were credited to the Municipality, and therefore not included in the Public revenue, whereas those receipts were in all, except the first year of the later period, credited to the Government. Mr. Caine has, therefore, inadvertently shown the increase of revenue at four or five times the real amount.

The omission of the Bombay City receipts in one of the five years ending 1882 vitiates the average of that period for comparison with later years, and there was no appreciable increase up to 1883-84.

After that year there was a considerable rise, correctly stated by Mr. Caine.

There was, however, a reduction in the number of shops from 393 in 1883-84 to 343 in 1884-85, and the increase in revenue was entirely due to a very considerable raising of the license fees for shops. Further comment on such figures, and the use made of them, is unnecessary.

Mr. Caine's statements in regard to Revenue from country spirit in Bombay.

34. For country spirits Mr. Caine gives what he states to be the revenue derived from "spirit manufactured at the Government distilleries." His figures are inaccurate, as is shown in the memorandum* by the Bombay Commissioner of Abkari. The increase which has occurred in the revenue from the still-head duty on spirits manufactured at the central distilleries in Bombay is mainly due, as stated by the Government of Bombay,—

- (a) to the extension year by year of the Central Distillery system to districts in which the Farming system had before been in force;
- (b) to the raising of the rates of duty, of which the Commissioner gives a few striking instances in his memorandum and full details in the appendix; and
- (c) to the absorption of Native States into the system under the management of the Bombay Excise Department.

Mr. Caine's statement in regard to Revenue from drugs in Bombay.

35. In stating the revenue derived from drugs Mr. Caine has omitted to mention, no doubt because he was ignorant of the fact, that, in the period for which he gives figures, duty on import, export, and transport of drugs was added to the taxation previously imposed. The figures for the different periods are not, therefore, comparable.

Mr. Caine's remarks on the increased consumption of beer.

36. Mr. Caine made the following remarks concerning beer:—

"There was also an increase of 60 per cent. in the imports of malt liquors in the three years. Furthermore, there is, all over India, a steadily increasing manufacture of beer, strong in alcohol, on which no duty is paid. All the increased consumption is Native and not English. The English population is more sober and abstemious than in times past, and its consumption of liquor has certainly not increased. We have now 15,000 teetotallers in the Indian Army, and the evidence goes to show that a decreasing amount of liquor is consumed by our soldiers."

In the above statement there are one or two slight inaccuracies of fact which we need not specially notice, but the statement that no Excise duty is paid is true generally of beer manufactured in British India after the European method.

37. Within the last fifteen years—the manufacture of beer in India is of recent date—the propriety of levying an Excise duty on beer has several times been considered by the Government of India. The conclusion arrived at on each of those occasions was that it was undoubtedly right that a duty equal to that imposed on imported beer should be levied, but that the amount of beer manufactured in India was as yet so small that it was not worth while to undertake legislation for this purpose and to incur the cost of collection: if duty had been payable in 1858 at one anna a gallon, the amount of revenue would only have been Rs. 4,500, and from this must have been deducted the cost of collection. The levy of duty was, therefore, not finally negatived, but postponed until the manufacture of beer in India should assume larger proportions.

* Paragraphs 21 and 22, on page 27 of the enclosure.

88. The table below furnishes information regarding the consumption of beer in India since 1877—

YEAR.	BEER MANUFACTURED IN INDIA.	IMPORTED BEER		TOTAL.	CONSUMPTION.		
		For general consump- tion.	For con- sumption by Troops.		By Troops.		By others than Troops.
					Indian Beer.	Imported Beer.	
	Gallons.	Gallons.*	Gallons.*	Gallons.	Gallons.	Gallons.*	Gallons.
1877	2,164,048	1,323,077	3,123,128	6,615,253	954,933	3,123,128	2,537,192
1878	1,522,769	1,069,211	1,905,222	4,577,262	869,270	1,069,222	1,742,710
1879	1,560,026	1,065,347	2,156,325	4,780,698	874,296	2,156,325	1,752,077
1880	1,974,578	1,132,978	1,695,953	4,823,215	1,294,773	1,695,953	1,834,483
1881	2,448,711	1,199,395	1,708,596	5,350,702	1,764,927	1,708,596	1,888,179
1882	2,591,667	1,170,854	1,498,234	5,261,455	1,639,914	1,498,234	2,093,307
1883	2,597,298	1,261,444	1,006,520	5,785,262	2,027,169	1,006,520	1,831,573
1884	2,778,880	1,006,913	1,505,062	5,350,855	2,030,499	1,505,062	1,815,294
1885	3,160,342	1,239,408	375,396	4,825,146	2,296,861	375,396	2,182,949
1886	4,463,638	1,715,638	152,064	6,271,340	3,339,361	152,064	2,779,915
1887	5,085,930	2,138,518	367,794	7,611,330	4,178,658	367,794	3,064,880
1888	5,352,191	2,306,580	415,816	8,106,587	4,625,175	415,816	3,122,596

* Official years.

39. These figures do not bear out the assertion that the increased consumption of beer "is Native and not English." The consumption of beer by the British troops in India has increased. This is not necessarily inconsistent with Mr. Caine's assertion that the British soldier is more temperate than formerly, as the quantity of beer supplied to the British soldier by the canteens only represents a portion of the total consumption of liquor by the army, and there has been an increase in the number of the troops from 60,000 to 70,000, dating from 1885; there has also been a marked decrease in the consumption of spirits by British soldiers. Moreover, the consumption by the general population, shown in column 8 of the table, is not consumption by Natives of India only; Natives of India as a rule do not drink beer made after the European method, but there is a considerable and increasing European and Eurasian population in India; and increase in the consumption of beer by the general population is almost entirely confined to these classes. The number of Europeans in India was—

In 1871	121,147
In 1881	142,612
Increase	21,465

As the number of British troops was not increased between 1871 and 1881 the whole of this increase occurred among the European general population; and undoubtedly there has been a further increase since 1881 when the last census was taken. The census returns do not show separately the numbers of the Eurasian population; but there is no reason to doubt that this section of the population has also increased. A great part of the increase of consumption of beer must be due to the mere numerical increase in the European and Eurasian population. Mr. Caine's assertion that the whole of the increase in the consumption of beer is due to increased consumption by Natives is, as nearly as may be, the exact opposite of the facts.

40. On a consideration of the figures showing the amount of beer manufactured in India contained in the above table, we some time ago formed the opinion that the production has so increased as to make it worth while to impose an Excise duty. And in our Despatch No. 327, dated 15th October 1889, we proposed the levy of duty at the same rate as is levied on imported beer. Of this Your Lordship has since approved.

Additional liquor shops in Ahmedabad.

41. Mr. Caine made a charge regarding the opening of additional shops in the Ahmedabad District in the following words:—

"I read in this last report, 1886-87—

"There were 102 spirit shops in the Ahmedabad district in the year 1884-85. Out of this number 19 shops were closed in the following year for want of custom. But during the year under report it was found necessary to re-open 11 of them."

"Another paragraph in the same report gives the explanation of this remarkable operation:—

"During the three years for which the farms were sold the farmer was not able to sell the full quantities of spirit removed by him from the distilleries under his minimum guarantee. So to enable him to do so, and keep up the revenue, 11 shops had to be re-opened. During these four years under review in these paragraphs the spirit issued from the Ahmedabad Distillery to this farmer who required 11 shops to be re-opened was as follows:—48,000 gallons, 57,000 gallons, 63,000 gallons, 69,000 gallons. The maximum of revenue is undoubtedly secured, the minimum of consumption is secured by an increase from 48,000 to 69,000 gallons, an increase of 45 per cent. in four years."

42. The reason why so large a number of shops as 102 was allowed in Ahmedabad was that a part of the district interlaces with territory belonging to the Gaikwar of Baroda (the Chief who is said to have expressed to Mr. Caine his wish to enforce total prohibition if he were permitted), and that in the Gaikwar's territory the facilities for obtaining liquor were greater and the price of liquor much lower than in Ahmedabad; in consequence it was necessary to allow an unusually large number of shops with the view of preventing smuggling from the foreign territory. The facilities for obtaining smuggled liquor were, however, so great that the farmer gave up for a time the attempt to compete with the Baroda farmers, and asked that nineteen of the shops should be closed, hoping that the negotiations then in contemplation for the introduction of a stricter system in the Gaikwar's territory would put an end to the illicit practices. As these negotiations were prolonged the farmer asked that eleven of the shops might be re-opened in order that he might recover a portion of the custom in British territory which he had been compelled to relinquish to his rivals in Baroda. This was allowed. But when, in July 1888, the negotiations with Baroda were brought to a successful issue, these eleven shops were again closed.

Alleged increase of shops in the North-Western Provinces and Oudh.

43. After referring to the increase of shops in Ahmedabad, Mr. Caine proceeded to make similar charges regarding several districts in the North-Western Provinces and Oudh, and quoted extracts from the Exchequer Reports of that Province. The Government of the North-Western Provinces and Oudh, in the letter which is appended to this Despatch, enclosure No. (12), deals in succession with each of those charges. We need not refer to them in detail; but merely remark that in our opinion it is shewn that if Mr. Caine had referred to the context of the reports from which he culled his passages, if he had even quoted in full all those he selected, and if he had stated the explanations of the various facts he brings to notice contained in the reports and in the orders of the Board of Revenue and the Local Government on them, the facts would have borne a different complexion from that which he put upon them.

44. The "standard" number of shops in proportion to population, mentioned in Mr. Caine's quotations, was laid down only as a general standard for comparison to assist Collectors in determining the appropriate number of shops

for their districts, because it had been found that the proportion of shops in different districts varied in a manner which appeared to be capricious. This standard had for its object, wherever it was to be used with the effect of increasing the number of shops, the displacing of illicit by licit consumption; and it was applied as frequently to the reduction of the number of shops as to their increase. The real facts are obvious from the Excise Reports and the orders passed by Government thereon.

We reproduce here the remarks of the North-Western Provinces Government on one of Mr. Caine's quotations, in which the standard number of shops was mentioned :—

"The passage referred to is paragraph 32 of the Report of the Commissioner of Excise for 1885-86, which runs as follows (the italics are not in the report) :—

"*Etawah*.—The number of shops has increased from 53 to 67. There are 5 shops in the Municipality which are reported to be sufficient. In the village tracts the number is still far below the Government standard; *there is only one shop to 10,368 of population, or one in 23·6 square miles*. Efforts are being made to bring the number of shops up to the prescribed standard. Besides the 67 shops now opened, licenses were granted for others; but they were withdrawn when it was found that no liquor was sold at these shops."

"Here, again, the words 'there is only one shop to 10,368 of population, or one in 23·6 square miles' have been omitted, with an object, obviously, similar to that which led to the omission of the words indicated in the preceding paragraph. A maximum standard having been prescribed by the Government with the object of adopting precautions against the consumption of unexcised liquor, the intention in this passage was to explain how and why this standard was not worked up to. The aim of the writer was not to draw the attention of the Government to the fact that he had increased the number of shops; but to explain that, although he had increased them, the circumstances of the district do not admit of the adoption of a standard prescribing a higher maximum as a safe guide. Incidentally he discloses, what Mr. Caine was careful to conceal from the House, that there is one shop only to more than 10,000 persons, and to every 23·6 square miles. From paragraph 15 of this letter will be seen more fully what are the circumstances of the district."

Since 1883-84 the number of shops for the sale of distilled liquor of all kinds in the North-Western Provinces and Oudh has been reduced by 1,523. This is conclusive proof that in recent years there has been no attempt to unduly increase the number of shops.

The liquor shop in Backergunge.

45. Mr. Caine in his speech during the Debate made a charge against the authorities of a district in Bengal in the following words :—

"In the district of Backergunge, in Bengal, a religious fair is held every year. For some years past a liquor shop has been established there. The agent of one of the excellent and useful associations which are springing up all over India, watching the actions of Government, called upon the zemindar who owned the land and urged him to refuse to supply land for the liquor-shops any longer. He refused accordingly; but the Collector, Mr. Clay, of Backergunge, dropped on the zemindar at once, and wrote to him asking for an explanation. The zemindar called and explained, and two more letters followed, both of which I will read: the first is addressed to Chunder Dass, farmer of corn, spirit, and drugs, Lakutia :—

"In accordance with the order of the Collector passed to-day, you are directed to open your shop as usual at the aforesaid mela. A copy of this order is sent to the proprietors of that mela, so that they may present to the Collector any objection, if they have any, to the opening of the aforesaid shop at the mela—G. C. Dutt, Excise Deputy Collector."

"The same gentleman, a Mr. Dutt, writes to Baboo Behari Lal Roy and two other zemindars—

"As a person named Parna Chunder Das, for a fee of 75 rupees, got a license for setting up a shop for the sale of wines, ganja, and opium at your Lakutia mela, and you did not allow him place to open his shop then, an order was issued on him to open his shop, and a copy of that order served on you that you may present to the Collector your objections, if you have any, to give him land for this purpose. Up to this day you have presented no objection and

given him no land for his shop. You are ordered to show cause before the Collector within two days why that shop should not be set up at your mēla.'

"What does this mean? These men are anxious to have their religious festival conducted decently and in order, and this Revenue official comes down upon them like a thousand of bricks, because of the shop not being opened. Just suppose for one moment a similar case in England."

The inference to be drawn from this statement is that undue pressure was put on the zemindar to induce him to give a site for a liquor-shop.

46. We will state the real facts of the case in connection with this shop. A fair is held every year in November at Lakutia. This fair is not a religious fair in any proper sense of the term. Like most, if not all, of the great fairs of India, it is held at the time of a religious festival, but is practically a fair for secular purposes. For more than twenty years a shop for the sale of liquor had been each year opened at the fair. Neither the proprietors nor any one else had ever raised any objection to the opening of the shop till 1888; no complaint was ever made of drunkenness at the fair, and the proprietors had always willingly granted a site for the shop. In November 1888 the right to open the shop was sold in ordinary course. When the purchaser went to open the shop a site was refused him and he reported this to the Deputy Collector. This was the first information the Excise authorities had of the change of view of the proprietors. As the reason of the change was not known a courteous letter was written on the 19th November by the Deputy Collector to the proprietors. Of that letter Mr. Caine has given a translation: the following is a full and exact translation, from which it will be seen that the tone of it is very different from what Mr. Caine believed it to be.

"To the Hon'ble Rakhai Chandra Ray, the Hon'ble Behari Lal Ray, and the Hon'ble Pyari Lal Ray Choudhuri—As a man, by name Purno Chandra Das, has taken the settlement at fees Rs 75 of the ganja, opium, and spirit shops in your Honors' Lakutia fair, and as your Honors have not given him a site for the shop, an order (or permission) was given him for opening the shop, and a copy of the order (or permission) was sent to your Honors, so that your Honors might represent before the Collector any objection you have to granting a site, but up to the present your Honors have not represented any objection. Therefore it is now written (not ordered) to your Honors that you may within two days represent to the Collector the reason why the shop should not be opened."

When that letter was written by the Deputy Collector, the Collector had no knowledge of the fact that an objection had been raised to the opening of the shop. Mr. Caine was misinformed when he said that the letter quoted was written after the Collector's correspondence and interviews with the proprietor. The next day the proprietor wrote to the Collector that in order to check drunkenness he was not inclined to allow a liquor-shop to be opened at the fair. The Collector inquired why objection was raised then for the first time, as there had been none in former years. The proprietor on the 21st November wrote explaining his reasons at length. On receipt of his letter the Collector gave instructions that the shop should not be opened; and the shop was not opened.

47. This incident is a striking illustration of the disadvantage at which the Government of India is placed when its policy is discussed in England. The inaccurate version of the facts which was furnished by Mr. Caine was no doubt accepted as correct in the House of Commons. The true facts cannot be made known till this Despatch reaches Your Lordship.

The Opium shop in Lucknow.

48. In the Debate a description by Mr. Caine of a visit paid by him to an

opium shop in Lucknow was quoted. We accept Mr. Caine's words as a substantially correct, though highly coloured, description of what he saw; and we regret, as much as Mr. Caine and Mr. Smith, that the habits of any class of the people, however small, should be such as to lead to what Mr. Caine saw. The women whom Mr. Caine saw would be persons who were, or had been, leading a life of open immorality, and we believe that if the haunts of the dregs of the population in any great city are examined scenes of vice, misery, and excess will be found, and that Lucknow is not an exception to the general rule. We have done what we believed to be practicable and expedient in the direction of discouraging the smoking of opium and its preparations by imposing a heavy duty on it, and by reducing the number of shops licensed for smoking. The papers forwarded by the North-Western Provinces Government, enclosure No. (13) of this Despatch, show that the habit of opium-smoking was much more prevalent in Lucknow in the time of the Kings of Oudh than it is now. The number of shops licensed for opium-smoking has been steadily and persistently reduced till the number is now as low as is consistent with refraining from attempting the impossible task of absolutely preventing the smoking of opium. The number of shops for opium-smoking in the Lucknow District was—

In 1870	.	.	.	.	.	.	.	.	.	50
" 1874	.	.	.	.	.	.	.	.	.	20
" 1883	.	.	.	.	.	.	.	.	.	12
" 1885	.	.	.	.	.	.	.	.	.	6
" 1887	.	.	.	.	.	.	.	.	.	3
for 1890	.	.	.	.	.	.	.	.	.	2

Alleged wish of the Gaikwar of Baroda to prohibit the consumption of liquor.

49. In his speech Sir John Gorst remarked that there was not a single Native State where total prohibition is effected or indeed attempted to be carried out; and Mr. Caine thereon interpolated: "The Gaikwar of Baroda would do so to-morrow if he were permitted. He told me so."

We cannot, of course, say what the Gaikwar's personal wishes may be until he has directly or indirectly indicated them to us. But in the records of our Foreign Department there is nothing to show that the Gaikwar has ever shown any desire to abolish the liquor shops in his territory; and we have ascertained from the Resident at Baroda that the Durbar has never expressed a desire to adopt measures of total prohibition in respect of the liquor trade in the Baroda State.

50. That the wishes of the Gaikwar, as stated to Mr. Caine, if the statement was not merely a form of politeness misunderstood by Mr. Caine, were of very recent origin, our knowledge of the history of the Excise arrangements in Baroda proves conclusively. The Bombay Government in introducing the reforms of the last ten or twelve years—which may be generally described as the abolition of the Farming system, the introduction in its stead of a system under which a fixed duty is levied on each gallon of liquor, and the increase of the price of liquor by raising, from time to time, the rate of duty, coupled with strong preventive measures against illicit distillation and sale—encountered more difficulty in Gujarat than in any other part of the Presidency. In Gujarat British territory is surrounded by and interlaced with Native States,—the largest and most important of which is Baroda—the Excise arrangements of which rendered it impossible to

enforce a stricter system in our territory with the same measure of success as elsewhere. The system which up to 1887 prevailed in Baroda, the ruler of which is said to have expressed to Mr. Caine his desire to enforce absolute prohibition, was that referred to by Rao Bahadur Lallubhai Gordhandas as "the old detestable Farming system" in the extract from his report given in paragraph 72 of this Despatch. Some of the results of that system were the sale of liquor in Baroda at much lower prices than in adjoining British territory, constant smuggling from Baroda, frequent affrays between the smugglers and the British preventive officers, and the demoralization of the people on both sides of the border by the facilities furnished by Baroda for obtaining cheap liquor. It was only with the greatest difficulty, and after invoking the help of the Government of India, that the Government of Bombay induced the Baroda Darbar to modify these faulty Excise arrangements. In 1887 the Baroda State did consent to introduce a stricter system, the agreement made with it providing for the introduction of the Central Distillery system in a portion of the State, and elsewhere, for the maintenance of a narrow belt of land extending to two miles on each side of the border, in which shops and sales should be entirely prohibited. These arrangements are being carried out, but difficulties are still encountered in securing the co-operation of the Gaikwar's Government in measures which have for their object the enhancement of price and restriction of consumption of liquor.

51. The extract given in Appendix K from a memorandum by Rao Bahadur Lallubhai Gordhandas shows that judged by every possible test which can be reduced to figures—the proportion of shops to area and to population, and the consumption of liquor per head,—the facilities for drinking and the amount of drinking are very much greater in Baroda Territory than in the adjoining British Districts. It is also shown that there has recently been a larger proportionate increase of revenue in Baroda.

52. We therefore maintain that if the wishes of the Gaikwar are what Mr. Caine supposes them to be, he has, at any rate, not shown any sign of desiring to give effect to them; the actions of the Baroda State, so far from indicating a desire for total prohibition, throw obstacles in the way of increasing such restrictions as are practically possible, and greater facilities for drinking are afforded in the Gaikwar's territory than are allowed in the British Districts. Within the last few months the Government of Bombay has officially appealed to us to exercise the authority of the Government of India by compelling the Gaikwar of Baroda to withdraw his refusal to raise the duty on spirit and increase the selling price of liquor. The case is still under consideration.

53. One of the objections raised by the Gaikwar's Dewan to the proposal of the Bombay Government that the rates of duty should be raised was that the measure "would compel liquor consumers to resort to illicit distillation, which could not be checked except by largely increasing preventive establishment at heavy cost to their Government." This objection was raised in August 1889, and subsequent to the date on which Mr. Caine had his conversation with the Gaikwar, and certainly affords no indication of an intention to prohibit liquor altogether, a course which would lead to still greater loss of revenue and to heavier expenditure on prevention.

The Excise system of Bengal.

54. Mr. Caine said :—"The worst and rottenest Excise system in the

civilised world is that of India; the worst and rottenest of the various systems of India is that of Bengal." We have already explained the circumstances under which, owing to the growth of illicit distillation under the Central Distillery system, Outstills were, after 1877, extensively re-introduced throughout Bengal. We have admitted that the change was made without sufficient discrimination, and that, coupled with the removal of the restriction on the capacity of Outstills, it led to an increase of drinking. As soon, however, as experience had shown that this was the case, steps were taken to remedy the evil, and there are the strongest grounds for holding that in recent years drinking has decreased and not increased.

55. We shall now give a few figures to show that the Bengal system does not now, and never did, merit the indiscriminate condemnation which Mr. Caine has applied to it.

The number of shops for the sale of all kinds of liquor and drugs in Bengal is shown in the following table for each year since 1870 :—

Year.	Distilled liquor.	Drugs.	Tari.	Pachwai.
1870-71	8,193	15,565	21,670	1,687
1871-72	8,937	16,615	21,689	1,815
1872-73	7,271	17,119	22,351	1,844
1873-74	6,812	10,975	22,873	2,006
1874-75	6,152	9,240	19,424	1,863
1875-76	5,394	7,424	19,265	1,661
1876-77	5,183	7,092	18,844	1,677
1877-78	5,267	7,216	19,077	1,717
1878-79	6,751	6,999	19,048	1,739
1879-80	6,878	6,877	21,579	2,066
1880-81	7,369	7,145	25,563	2,034
1881-82	6,874	6,796	30,268	2,135
1882-83	5,634	6,499	30,311	2,159
1883-84	5,740	6,513	20,134	2,259
1884-85	5,502	6,291	19,577	2,168
1885-86	5,298	6,005	19,555	2,162
1886-87	5,310	5,922	19,471	2,195
1887-88	5,112	6,059	19,051	2,157
1888-89	4,539	6,092	18,467	2,203

It will be observed that since 1870-71 the number of shops for the sale of distilled liquor has been reduced by 3,654, or more than 44 per cent.; the number of shops for the sale of drugs has been reduced by 9,473, or more than 60 per cent.; the number of shops for the sale of tari has been reduced by 3,203, or more than 10 per cent.; the number of shops for the sale of pachwai, or rice-beer, has been increased by 516, or more than 23 per cent.

Tari and pachwai are comparatively weak and harmless liquors.

56. Some difficulty is experienced in giving the rates of duty on spirit for different years in a form suitable for comparison, as there is no uniform rate for the whole Province and there have been frequent changes of system, the Central Distillery system and the Outstill system frequently replacing one another. The course of these changes is explained in Appendix H. We shall, therefore, merely attempt to give an outline of the nature of the changes in the rate of duty.

57. The Central Distillery system was introduced into the eleven districts in Bengal comprising the Burdwan and Presidency Divisions in 1861-62; it was extended to sixteen other districts in 1862-63, and to seven more in 1864-65.

In the Burdwan and Presidency Divisions the duty was levied at the

uniform rate of R2-4 a gallon. But it was not found possible to levy the same high rate of duty in the districts in which the Central Distillery system was introduced in 1862-63 and 1863-64; and it was also found impracticable to enforce a uniform rate: while the rate of R2-4 was generally maintained in the Burdwan and Presidency Divisions, and even subsequently increased in many places, in other districts lower varying rates were imposed.

It will be seen from Appendix F that the general tendency was to increase from time to time the rate in all districts. The rates in the Presidency and Burdwan Divisions were doubled in some districts, and more than doubled in others.

In most districts of the Rajshahye Division the rates were also doubled. The same remark applies to the Bhagulpore, Patna, and Orissa Divisions, while the duty has been considerably increased in all districts of the Chota Nagpore Division.

There are three distinct periods in Excise administration in Bengal since 1860, namely, (1) the introduction of the Central Distillery system, (2) the reversion to the Outstill system in the years after 1877, (3) the reversion again in many places to the Central Distillery system in 1885-86 and following years. Up to the time of the abolition of the Central Distillery system the general tendency was towards an increase in the rates of duty, and when the Central Distillery system was re-introduced in 1885-86 the high rates previously levied were again imposed. The highest rate of duty is now R5 as compared with R2-4 in 1861, an increase of more than 120 per cent.

58. During the same period the rate of duty on ganja has been continuously raised from R2-6 per seer in 1870-71 to R8-5 in the present year. Ganja is a drug which is far more injurious in its effects than spirit or than any other drug commonly consumed.

59. The rate of duty on opium varies in different districts. In 1870-71 the selling price was as follows:—

R16 per seer in seven districts;
R19 in one;
R20 in two; and
R22 in thirty-three.

At the present time the rates are:—

R16 per seer in seven districts;
R20 in one;
R22 in one, and in part of another;
R24 in one, and in the remaining part of that just mentioned;
R26 in four;
R27 in five;
R28 in twenty-one;
R30 in one; and
R32 in three.

As the cost of producing opium is about R7 a seer, a rise in price from R22 to R32 represents an increase in duty of nearly 80 per cent.

60. The Chief Commissionership of Assam was formerly a portion of Bengal. It was separated from that Province in 1874, and the figures of number of shops and duty just given refer only to the present Province of Bengal. It will, however, be convenient to indicate in this place what the policy of Government has been in regard to the consumption of opium in Assam, because that policy was initiated by the Government of Bengal. Assam was acquired between 1826 and 1854. The poppy was extensively cultivated in it, and

the population, which was remarkable for its indolence, largely consumed opium. It may be that the excessive dampness and malaria which prevail in Assam make the consumption of opium beneficial in some respects, but the Government of India believed that the extent to which opium was consumed was injurious, and that it would be possible to restrict consumption. The cultivation of opium was consequently prohibited in Assam in 1860, before the Province was separated from Bengal, while the number of shops was gradually reduced and the rates of duty raised.

61. The following figures give the number of shops in Assam for the sale of opium every year since 1868-69 :—

1868-69	.	.	.	.	.	.	.	.	.	4,501
1869-70	.	.	.	.	.	.	.	.	.	4,556
1870-71	.	.	.	.	.	.	.	.	.	4,469
1871-72	.	.	.	.	.	.	.	.	.	4,567
1872-73	.	.	.	.	.	.	.	.	.	5,070
1873-74	.	.	.	.	.	.	.	.	.	3,977
1874-75	.	.	.	.	.	.	.	.	.	3,151
1875-76	.	.	.	.	.	.	.	.	.	2,838
1876-77	.	.	.	.	.	.	.	.	.	1,271
1877-78	.	.	.	.	.	.	.	.	.	1,342
1878-79	.	.	.	.	.	.	.	.	.	1,367
1879-80	.	.	.	.	.	.	.	.	.	1,397
1880-81	.	.	.	.	.	.	.	.	.	1,404
1881-82	.	.	.	.	.	.	.	.	.	1,373
1882-83	.	.	.	.	.	.	.	.	.	1,283
1883-84	.	.	.	.	.	.	.	.	.	1,250
1884-85	.	.	.	.	.	.	.	.	.	1,175
1885-86	.	.	.	.	.	.	.	.	.	1,067
1886-87	.	.	.	.	.	.	.	.	.	999
1887-88	.	.	.	.	.	.	.	.	.	1,067
1888-89	.	.	.	.	.	.	.	.	.	989

The number of shops has been reduced from 4,501 to 989, or by more than 78 per cent. During the same period the selling price of opium has been increased from R14 per seer to R32 per seer, representing an increase in duty of 257 per cent.

62. These stringent measures have not been without success, as, in the Chief Commissioner's Resolution on the Excise Report for 1888-89, it was said :—

"The consumption of opium and the revenue obtained from it have been very steady during the last few years. So far as revenue is concerned, it is the consumption of this drug in the districts of the Assam Valley which brings us three-fifths of the whole Excise revenue of the Province; and seeing that for some years past we have practically obtained the same revenue from the same consumption with apparently very little, if any, smuggling, it would seem that the time has come to raise the question whether the price at the treasury, which has been for some years at its present figure, might not now be increased. It is believed that the habit of opium consumption is becoming less inveterate among the indigenous Assamese, and that the generation now growing up will not be habitual consumers to the same extent as their fathers."

63. With the exception of the extension of the Outstill system, and removal of the restriction on the capacity of stills, which led to an increase of drinking between 1877 and 1884, we consider that the management of the Excise Department in Bengal has been very satisfactory, and we are wholly unable to reconcile the figures for number of shops and rates of duty which we have given with the terms of Mr. Smith's motion that "the fiscal system of the Government of India leads to the establishment of spirit distilleries, liquor and opium shops in large numbers of places where till

recently they never existed, in defiance of Native opinion and the protests of the inhabitants, and that such increased facilities for drinking produce a steadily increasing consumption, and spread ruin and misery among the industrial classes of India," or with Mr. Caine's assertion that "the worst and rottenest Excise system in the civilised world is that of India; the worst and rottenest of the various systems of India is that of Bengal."

Outstills at Tea Gardens.

64. There is one important statement made by Mr. Smith with which we are not in a position to deal fully at present. We refer to the quotation given from a letter received from a Tea plantation. The Excise question in connection with the coolies on Tea plantations is an extremely difficult one. The coolies generally belong to a class which habitually consumes liquor; they have removed from their native country and are employed in a damp, malarious, and unhealthy climate. Under such circumstances their desire for drink is strong, and the facilities for obtaining illicit liquor in the neighbourhood of the gardens are very great. The whole question connected with the liquor question in relation to Tea gardens is being thoroughly inquired into in Bengal and Assam, and when the inquiries are completed, we shall specially address Your Lordship on the subject. In the meantime we may remark that so far as the evidence before us goes, the statements made in the letter quoted by Mr. Smith appear to be greatly exaggerated. The reports on the subject which we have as yet received relate to Assam, and will be found as enclosures Nos. (18) and (19) of this Despatch.

SECTION II.—EXCISE SYSTEMS IN FORCE IN BRITISH INDIA.

65. We shall now attempt to explain the difficulties encountered in this country in dealing with the Excise question, and to set forth the systems adopted with the object of meeting these difficulties.

In Appendix G will be found a memorandum giving a brief description of the various systems of Excise which are in force at the present day in British India. In this memorandum we have grouped together the systems in different provinces which have the same main features in common, although they may be known by different names, and although the system in one province may have had a very different origin and history from that which it has had in another. The remarks in the memorandum apply only to systems for the levy of a duty on spirits manufactured in India. The system applied to foreign imported liquor is practically the same in all provinces. Imported wines and spirits pay the customs duty leviable under the Tariff Act, and licenses for their sale are granted by the several Local Governments, usually on the payment of a fixed fee for the year.

A sketch of the history of Excise in each of the five chief Provinces will also be found in Appendix H.

Impossibility of adopting a uniform system of Excise.

66. The system of Excise which we should adopt universally, if it were possible, is one under which a fixed duty would be levied on each gallon of spirit in proportion to alcoholic strength; this system has been approved for many years both by the Government of India and by the various Local Governments. It is known in its simplest form as the Central Distillery system, because under it all liquor is distilled at a public distillery, centrally situated

with reference to the tract to be supplied, and watched by a preventive establishment appointed by Government. No liquor is allowed to leave the Central Distillery until the duty has been paid.

67. The history of Excise Administration in India given in Appendix H will show that the line of progress has been from the Farming system, which we inherited from the Native States which preceded British rule, towards a system under which each gallon of spirit pays a fixed duty.

68. The earliest system was that of uncontrolled farming; the farmer paid a lump sum for the right to manufacture and sell liquor in a specified tract of country; there was no limit as to number of shops, and he made what profit he could out of his farm. The next step was the limitation of the number of shops. A further step was the establishment of the Outstill, under which only the right to manufacture and sell at a specified shop is granted. The chief objection both to the Farming and Outstill systems, as just described, is that there is no control over the rate of duty per gallon, and, consequently, it may be to the interest of the farmer or licensee to steadily lower prices. It then becomes necessary to consider whether an attempt can be successfully made to establish a system under which each gallon of spirits shall pay a fixed duty. This may be done roughly and imperfectly by limiting the capacity of the Outstill and fixing a minimum rate of duty for the right to work the Outstill. If the Outstill can only produce a certain number of gallons of spirit in the month and must pay a certain tax every month, we know that each gallon of spirit will bear, at least, a certain rate of duty and cannot be sold below a certain price. The practical difficulty in the way of securing this result is the facility which the licensee possesses for distilling in a still other than that which has been licensed. This difficulty is in some cases insuperable. A perfect remedy lies in the establishment of a Central Distillery system, but unfortunately the practical experience of years, and the results of many experiments, have shown that it is impossible to maintain this system in all parts of India.

69. Under the Farming and Outstill systems the interest of the monopolist is enlisted for the suppression of illicit distillation, and sources of information and means of detection are available to him which are not accessible to officials. This is not the case under the ordinary Central Distillery system. Under that system it is to the interest of the distiller both to distil illicitly outside the distillery and to smuggle liquor out of the distillery without payment of duty. The shop-keeper and the subordinate officials share the profit. Thus it was proved in the course of a judicial enquiry in the Gya District of Bengal that out of the spirit made at one outlying distillery only one gallon out of three paid duty to Government, the duty on the second being retained by the preventive officer, who allowed the distiller to take out every third gallon free.

The key to the numerous and complicated systems of Excise which prevail in different parts of British India lies in the fact that they are attempts to combine the monopoly and fixed duty systems with the object of securing that every gallon of spirit shall bear a certain rate of duty in places where it is not possible to work the fixed duty system in its simplest form.

Unsuitability of the Central Distillery System for portions of India.

70. We will now state some of the chief reasons which render the Central Distillery system unsuitable in many parts of India.

(1) Where the quantity of liquor consumed is small, the cost of a central

distillery and of an establishment to guard it, and to prevent outside distillation, is prohibitive.

(2) It is found impossible, on the scale of pay which we are able to give, to obtain for those establishments men who are thoroughly trustworthy. In remote tracts where supervision is insufficient they enter into collusion with the distillers and defraud the Government. The Excise Reports abound with statements to the effect that a large portion of the liquor distilled in central distilleries was passed out for consumption free of duty. In places where such establishments and the police are entrusted with powers to detect and prevent illicit distillation, and where the inducements to resort to that practice are great, still more serious evils too often result. The nature of these evils is explained in the following extract from the Report of the Bengal Excise Commission :—

“One, and in the opinion of the Commission the main, reason of this* is not far to seek.

* The sympathy of the people with illicit practices and their unwillingness to assist the officers of Government in detecting them.

Activity on the part of detective officers in Bengal must almost necessarily lead to their stretching the powers given by law to a perilous extent and too often, it is to be feared, to their abusing those powers. The most formidable and unpopular of these is the power of search. When it is considered that, as mentioned above, illicit distillation is most frequently carried on in the inner rooms of houses, it will easily be understood how hateful a zealous detective officer must be to the people of a village, and how formidable his power of oppression and extortion. It is not too much to assert that the evils and dangers almost inseparable from all attempts to put down the illicit manufacture of country spirit by direct preventive measures are as grave as those entailed by the prevalence of the unlawful practice, and the Commission consider that this is a most important factor in the Excise problem. They wish to direct special attention to the subject here, as many of the witnesses who appeared before them seemed to think that the suppression of illicit distillation is merely a question of employing a sufficiently strong detective establishment, and to have overlooked completely the danger of such a force becoming an engine of oppression, worry and extortion more formidable and dangerous to the innocent than to the offenders, particularly in outlying and jungly places, where the supervision of trustworthy superiors would almost necessarily be wanting, and where, owing to the great probability of the existence of illicit practices, the excisemen would have most opportunities to harass and oppress unoffending people. Colonel Dalton, in a report from which an extract has already been made, stated that there was nothing which had set him so much against the Central Distillery system as the number of persons he had lately seen undergoing imprisonment in the common jail for offences against the Excise laws. This consideration appears very much more grave when it is realised that the numbers of offenders actually convicted were in all probability very few in proportion to the number of innocent people who had been worried and harassed in the process of hunting out the breaches of the law. It must never be forgotten that all attempts to limit the consumption of spirit by over-stringent Excise measures must have a tendency to lead to illicit practices; that the same considerations which lead to the restriction of licit consumption make it necessary to take further measures to prevent such illicit practices; and that there is in this a constant source and most serious danger to innocent people. All this, of course, is not an argument against the attempt to regulate consumption, but it proves the necessity of always proceeding in a cautious and tentative manner.”

(3) Another reason is defective means of communication. Many parts of India are at all times difficult of access, and during the rainy season many more are practically entirely shut off from communication with neighbouring places. In such tracts unless the inhabitants are to be entirely deprived of liquor—a deprivation to which they would not submit, and against which the facilities for illicit distillation furnish them with a powerful protection—it is necessary that the liquor should be distilled on the spot, communication with the Central Distillery being frequently interrupted.

(4) The difficulty of preventing illicit distillation is very great. We have already dealt with this question in paragraphs 20 to 23 and need not say anything

more in this place beyond quoting, from a memorandum by the Chief Commissioner of Assam, passages which show that the circumstances of a tract so considerable as the Province of Assam are such as to render impossible the introduction not only of the Central Distillery system, but of any system which involves the direct control of distillation. In nearly the whole of Assam we must be content with enforcing direct restrictions on the sale of spirit, sale to the public being a transaction which cannot be altogether concealed, while distillation may be carried on in secret without fear of detection :—

"12. Now let us look for a moment at the means we have of controlling and restricting the manufacture and use of liquor among the population, that is, the means we have of enforcing any prohibition that we may choose to issue.

"First of all, to what extent may the country itself be considered open or accessible? The following are the statistics :—

Districts.	Settled and cultivated.	Forest and uncultivated.
	Acres.	Acres.
Goalpara (a)	72,000	938,000
Kamrup	688,000	1,035,000
Darrang	302,000	1,826,000
Nowgong	318,000	1,767,000
Sibsagar	609,000	1,217,000
Lakhimpur	270,000	2,104,000
TOTAL	2,328,000	9,487,000

(a) Excluding the permanently-settled portion.

"In short, about four-fifths of the area is covered either with tree or with grass jungle. And this jungle is not confined to one part of the district, but is scattered all through it. The cultivation, in short, is in patches, reclaimed here and there from jungle (and often falling back into it), and, except in some parts of Kamrup, none of it is really far from jungle.

"13. Moreover, the Assam village is not, like the village in Bengal or in Northern India, an aggregation of houses in a single part of the village area, where every man lives within hail of his neighbour. The Assamese loves to bury himself in the privacy of his own domain, and his house is separated from his neighbours by a belt of trees or of bushes. It remains to note that, according to the Census of 1881, the average number of houses to the square mile is 18, and of persons 105.

"14. These, therefore, are the circumstances with which we have to deal,—a sparse population scattered over a country of which four-fifths is jungle, in which every villager surrounds his house with high vegetation, and has nowhere very far to go if he wants to hide himself away altogether from human sight. The drinking classes among them, familiar with the methods of brewing and distilling, continually possessing the materials at hand, and nowhere more than twenty miles distant from places where every householder has for ages brewed or distilled his own liquor and consumed it as regularly as he eats his food. Where is the means under such circumstances of prohibiting or even restraining any man who wants to drink? It seems to me that the most efficient preventive service in the world would find it difficult to attain any success; and unfortunately we have hardly any expectation of finding any but a most inefficient service. We can under present circumstances use the police only, that is to say, looking to the number of policemen available for district duties, one man for every thirty or forty square miles: and as the higher officers of the police belong to a large extent to foreign races, the force is less efficient on this account.

"15. It follows from all this that it is hopeless to establish in the Assam Valley districts any system of Excise administration which in any degree depends upon our ability to prevent or detect illicit distillation. If people want to obtain spirits, they can do so either by getting smuggled spirit from the hills; or by brewing and distilling for themselves by methods with which they are quite familiar, and which are very cheaply and easily available.

"19. The result of all these considerations is that over nearly the whole of Assam only one method of taxing liquor is open to us, *viz.*, that of licensing individual shop-keepers to distil and sell country spirits at specified places. We cannot afford even to impose any restrictions upon their distillation, such as by limiting the size of stills or the hours when they

may be used. The latter restriction we have no means of enforcing, and the former can be easily evaded by setting up a still in some adjacent jungle. It is the selling, and not the distillation, which must for the most part take place in public and can therefore be subjected to control; and our principal means of preventing illicit sale is to make it the licensee's interest that no sale shall take place besides that in respect of which he has paid a fee to us.

"20. Personally, I hold most strongly to the view that the system of a still-head duty per gallon is the only satisfactory method of Excise administration, and that no other system can give us a satisfactory control over spirit manufacture and spirit consumption. But the result of such information as I have been able to gather from officers who have dealt with the problem in Assam and from a perusal of past records, and especially of a recent discussion on this very point, which Mr. Fitzpatrick submitted to the Government of India with his letter of 13th November 1888, is to show that the circumstances of Assam are such that the first conditions of such a system, *viz.*, the possibility of preventing illicit distillation, does not exist. The only area where a Central Distillery system seems to have any chance of success seems to be the central portion of Cachar, and the success of the system there would largely depend upon the possibility of keeping outside the Central Distillery area the spirit distilled under the Outstill system all around it."

The following extract from the report of the Bengal Excise Commission shows how extensively illicit distillation and smuggling prevails in some places under the Central Distillery system:—

*"Positive evidence of the prevalence of illicit distillation in various districts.—*The actual fact seems to be that illicit distillation extensively prevailed in some districts, especially in those in which the mohwa-tree grows, those in which the lower classes of the population use country-liquor extensively, and generally in wild and thinly-populated tracts; and that, on the other hand, it was comparatively rare in towns, thickly-populated tracts, and among populations not given to the use of spirituous liquors. This view is supported by the positive evidence on the subject. In Gya, Baboo Bhup Sen Singh, the Government Pleader, who has an intimate knowledge of the district, stated that there had been illicit distillation under the Central Distillery system, and this was corroborated by Shek Aulad Ali, an Assistant Superintendent of Police with 45 years' experience of the district; by Ray Brahmo Datta, now excise-inspector of the Division, formerly excise-sheristadar; and by Baboo Prankumar Das, excise deputy collector of the district, whose evidence on this point should be referred to. In Patna and Sarun it would seem to have been less prevalent, though there is clear evidence as to its existence in both districts. The deputy inspector of schools in Mozufferpore stated that while the Central Distillery system was in force well-to-do people used to distil spirits in their own houses. Munshi Kuldip Narain, sub-manager of Raj Durbhunga, stated that in the Durbhunga district many cases of illicit distillation were heard of previous to the introduction of the Outstill system. Mr. Cameron, sub-divisional officer of Bettiah, stated that there used to be much illicit distillation in Chumparan; and this is corroborated by Mr. Shaw, of Purnea indigo-factory, and other witnesses. In Monghyr the Rev. Mr. Evans and other witnesses give strong opinions as to the improbability of the existence of illicit distillation owing to the ease with which it could be detected; but Mr. Pushong, a witness who has unusual opportunities of knowing the actual facts, stated from personal knowledge that considerable illicit distillation among respectable people had been carried on before the introduction of Outstills; and he added that wherever there is a Central Distillery there will also be illicit distillation and smuggling. This view was strongly represented to the President of the Commission in conversation by Baboo Kamaleari Prosad, a wealthy zemindar, whose father had been for many years engaged in the spirit trade. In Bhagulpore Baboo Surjya Narain Singh, Tej Narain, Tarini Prosad, and others spoke of the existence of illicit distillation in that district. In Chota Nagpore there was much evidence of the prevalence of illicit distillation during the Central Distillery period, but a few examples will suffice. In Hazaribagh the Government Pleader, Rai Jaju Nath Mukerji Bahadur, one of the best informed and most experienced witnesses that appeared before the Commission, said:—"There used to be much illicit distillation under the Central Distillery system, but it has diminished of late. It is the interest of the Outstill-holder to put down illicit distillation. It was the interest of the retailer to sell illicit spirit under the cover of duty-paid spirit, and he was therefore the ally of the illicit distiller when he did not illicitly distil himself. Zemindars and other well-to-do people send their material to Outstills to be distilled. They used to do the same with the sudder distillers but not often." Baboo Navakrishna Roy, police inspector of Lohardugga, has given lists of 54 villages in two thanas of that district in which cases of illicit distillation were detected, and adds that it was known to exist in very many more villages, in which, however, no cases

were detected. The Rev. Mr. Uffman, a missionary who has resided for 17 years in Manbhoom, states that there used to be illicit distillation in that district. In Beerbhoom the Commission obtained a list of 40 villages in which illicit distillation was known to have existed, and some most respectable gentlemen were unanimous as to its prevalence in 31 of these. Some of them, but not all, had heard of the illicit practice in six of the other villages, and none of them knew anything about the remaining three."

(5) Even where there are no special difficulties of communication, it is sometimes necessary that the liquor should be distilled on the spot and not brought from a distant distillery; because in the hot season some kinds of liquor of low strength will not bear transportation. Any measure which would drive the people to the use of a stronger instead of a weaker liquor is opposed to sound principles of Excise administration as we understand them.

A series of extracts from Reports showing the difficulties in the way of adopting the Central Distillery system in many places will be found in Appendix L.

Difficulties in connection with Native States.

71. The state of things to which we have just referred exists within the borders of British India, and the consequent difficulties in enforcing restrictions on drink would arise if the British administration extended over the whole of India. But of the continent of India, a scattered area, interlaced in many places with British territory, amounting in extent to about one-third of the whole, and containing a population of about one-fifth, belongs to Native States, with the internal administration of which in matters of Excise the Government of India does not ordinarily interfere, and cannot in some cases interfere as a matter of right without straining its authority beyond what is safe or justifiable. In all those States the Excise systems were, and in most still are, incomparably more lax than in British territory. The system generally followed in them has been an uncontrolled Farming system with practically no restrictions on the farmer to prevent his unduly diminishing the price of liquor or increasing the number of shops. The consequence is that the cheaper liquor of Native States is constantly smuggled into British territory. The only complete remedy for this evil lies in inducing those States to adopt a stricter system and to impose higher rates of duty; and this the Local Governments have in some cases succeeded in doing in recent years, notably in Bombay and, more recently and to a much smaller extent, in the Punjab. In Bombay the Government has also obtained, at a not inconsiderable cost, the consent of some Chiefs to our officers undertaking the direct management of the Excise administration of their States.

72. The following extracts from a Report by Rao Bahadur Lallabhai Gurdhundas, dated 15th July 1887, indicate the serious nature of the difficulty described in the preceding paragraph. His remarks:—

* * * * *

"5. Under this plan of exact taxation, it is necessary to fix the rates of duty for different districts with great care and circumspection. As the amount of duty would govern the selling price of the liquor, and as there is a certain price, varying according to the character, habits, and wealth of the people, which can safely be realised on the spirits consumed by the masses, and which cannot be exceeded with impunity, the duty on liquor ought not to exceed the difference between that price and the cost of the liquor. Even when the people themselves can afford to pay for a moderate and harmless dose a price that would cover the highest rate of duty which Government desire to impose, the possibility of smuggling and illicit distillation is not to be lost sight of in the zeal for enhancing the price of liquor with a view to diminish consumption. Preventive establishments and stringent penal enactments can do a great deal in suppressing illicit distillation, which cannot long remain undetected. But where a liquor

made dear by the imposition of a high rate of duty is confronted by cheaper liquor, to be had for a stroll to an adjacent foreign shop, the whole of the liquor-drinking population for miles round will flock daily for drink to the foreign liquor shop; and experience has shown that Kolis, Warlis, and other low classes addicted to drink will not mind walking 10 miles to a shop and back in order to get cheap liquor; and, what is even worse, quantities of cheap liquor will always be smuggled into the high-priced liquor tract without much fear of detection; in short, the object aimed at of diminishing the consumption of liquor will be defeated. Therefore, in districts which are bordered by or interlaced with foreign territory, the desired result can be obtained only by the same system being adopted and worked consistently in both territories. To this end the co-operation of our neighbouring Native Chiefs is essential to the mutual advantage of themselves and the Government.

"6. Government have experienced comparatively little difficulty in securing the co-operation in this behalf of the Native Chiefs in the Konkan, Deccan, and Southern Mahratta country, all of whom, with a few exceptions, have handed over the management of the abkari of their States to the Government for a term of years on payment of liberal annual compensation; and Government have thereby been enabled, not only to supplant the infamous Farming system of old and to launch with success the new system of the equitable taxation in those States as well as in their own contiguous districts, but also to bring within a short period of three years the Excise rates in the greater portion of the territories concerned to the desired level. The excepted States are those of Kolhapur, Savantvadi, and Janjira, which with equal readiness have adopted the same system and rates on their own account, and have for years past been reaping the fruits of their foresight and prudence in the shape of large progressive profits to the State treasury and improvement in the moral and material condition of the poorer classes—results which are no less conspicuous in the British districts and other Native States brought under the influence of the new system and policy

"7. In Gujarat, on the other hand, opportunity has not yet been afforded to try the same experiment under equally favourable conditions. Consequently, considerably lower rates of liquor excise and selling prices still prevail in that province, while in the contiguous Native States the old detestable Farming system continues to flourish. A question naturally arises, why has Gujarat, with all these favourable circumstances, lagged in recent years far behind other districts of the presidency in the progress of abkari reform designed to raise the largest amount of revenue from the smallest consumption of liquor? The answer to this question directly points to the obstacle—the absence of sympathetic arrangements and action in contiguous Native States—which the subject of this report is intended to remove. It is needless now to describe here the details of the correspondence carried on during the last eight years with a view to the removal of that obstacle. Happily, the controversy promises to terminate with the acceptance by our Government and faithful observance by the Native Chiefs concerned of the understandings which I shall proceed directly to narrate.

"8. I request you to glance at the map of the Bombay Presidency and to mark the contrast which the situation of British Gujarat presents to that of the rest of the presidency with reference to foreign territory. Barring the Holkar's dominion which marches along the northern frontier of Khandesh for a distance of about 150 miles, and with which no abkari convention has yet been thought of, and barring also the Nizam's dominion which marches along the eastern frontiers of the districts of Khandesh, Nasik, Ahmednagar, Sholapur, Bijapur, and Dharwar almost in a regular line for a distance of about 700 miles, and with which the mutual retirement of liquor shops and stills to a distance of 8 miles on either side of the frontier has just been agreed upon, the rest of the Native territory with which the larger block of the presidency south of Daman is concerned consists of but one first class State and a number of petty holdings of small extent and importance, all imbedded in the midst of British territory. British Gujarat, on the other hand, is, as it were, surrounded by a sea of, and intersected by, innumerable gulfs, creeks, and lakes of foreign territory, which includes the large and important State of Baroda, many other first, second, and third class States, and a number of petty talukas and thakorates, each owned by a separate Chief or Thakor. From this geographical contrast between the two divisions of the presidency, it will readily be seen that the task of forming what for brevity's sake may be called the abkari *soll-ver-ein* must be much more difficult in Gujarat than in the rest of the presidency. The difficulty of the task, which is due to the peculiar configuration and relative situations of British and Native territories in Gujarat, to the great difference in the magnitude, status, and the internal and external conditions of the different Native States to be dealt with, and, above all, to the conservatism of the Chiefs and their sentiments of dignity and rights, has been two-fold: first, to incline all these Chiefs, large and small, to co-operation; and, secondly, to arrange with each the form and terms of co-operation which might be acceptable to the Chief and satisfactory to Government."

78. Further extracts bearing on this question will be found in Appendix D, but we will quote in this place an extract from a letter from the Government of the North-Western Provinces and Oudh, which gives Sir Auckland Colvin's personal experience in the cold weather of 1888-89:—

"During his march last year throughout Oudh, in no single instance has the Lieutenant-Governor and Chief Commissioner observed a case of drunkenness until he arrived on the Nepal border, when special police precautions had to be taken to prevent the camp-followers obtaining liquor at cheap rates on the Nepalese side of the frontier. In spite of these precautions as soon as the camp reach the Nepal border, men who, in face of the higher price of the excised liquor in our own territory, had hitherto found no opportunities of indulging their appetite, were seen by no means unfrequently in various stages of intoxication along the line of march."

Groundlessness of the charge that our Excise Administration gives greater facilities for drinking than an administration based on principles approved by the Native inhabitants and Native rulers would do.

74. The extracts just quoted and those given in Appendix D have been referred to with the object of explaining the existence of a very serious practical difficulty in the enforcement of Excise regulations in British India. But they also serve another purpose, and prove how groundless are the charges made against the Government of India that any increase in the habits of drinking which has taken place in India is due to the British Excise administration, and that, had the administration been conducted on the principles approved by the Native inhabitants and Native rulers, an increase would not have occurred. It may be true that, in some instances, our Excise administration has not been strong enough to counteract the tendency of other forces and to prevent an increase; but one of the main difficulties in the way of achieving that result is due to the less stringent regulations which prevail in the Native States adjoining and interlaced with British territory. Those States are ruled by Native rulers in accordance with Native ideas; and it is found that until pressure is brought to bear by the Paramount Power to induce them to adopt more stringent regulations, their Excise systems are such as to offer the smallest possible discouragement to drinking and are many times more lax than the laxest of the systems with which the Government of India has been in places obliged to be content, and the existence of which forms the main ground of the attacks which have been made on its Excise policy. In short, the mere fact of a British district being coterminous with a Native State is invariably found to be a serious obstacle in the way of raising the taxation on liquor in that district and of enforcing measures designed to restrict consumption. The only resource in such cases, when it is found impossible to make any satisfactory arrangement with the Native ruler, is to place the tracts affected under the Farming or Outstill system. The amount of revenue obtained in this way is never great, and the restriction on consumption is comparatively slight, but at any rate there is some restriction and the revenue is not wholly lost.

In a note by Rao Bahadur Lallabhai Gurdhandas, dated 19th July 1889, which will be found among the enclosures of the letter No. 9255 of 6th December 1889 appended to this Despatch, a comparison of the Excise arrangements existing in the Native States of the Bombay Presidency with that in the neighbouring British districts is made. The general assertion made in this paragraph is there proved by statistics to be true in regard to those particular Native States. The figures in that note show conclusively for each State

included in the examination that the number of shops per square mile is larger, that the average population served by each shop is smaller, and that the consumption per head is greater than in the adjoining British districts, and this is the case in spite of the fact that these States have been induced by the Bombay Government to adopt a system which is far more strict than that which formerly prevailed in them.

Reasons for the existence of many different systems.

75. The examination of the history of the Excise administration given in Appendix H will show that the tendency has always been towards the general introduction of the Central Distillery system, and that partial reversions towards a more primitive and less satisfactory system have either been temporary and experimental, or have arisen from the fact that the introduction of the Central Distillery system had been carried too far.

76. It was between 1860 and 1864 that the Central Distillery system was generally introduced into Bengal and the Upper Provinces of India.

In the Province of Bengal it was found necessary to abandon the Central Distillery system in a few places very shortly after it was introduced. It was also found that the high uniform rate of duty could not be enforced in all places where the Central Distillery system was maintained. The choice, therefore, lay between a low uniform rate of duty and a scale varying from place to place. The latter alternative was adopted. The subsequent substitution on an extensive scale of the Outstill for the Central Distillery system after 1877 was not made without cause. The objections to the Central Distillery system were obvious and it was hoped that certain advantages, such as the suppression of fraud, of illicit manufacture and smuggling, and a consequent increase of revenue would be obtained. These advantages were actually secured, but the change was accompanied by the removal of the restriction on the capacity of outstills, and an increase of drinking followed which has rendered it expedient to return to the Central Distillery system where practicable, and to impose various restrictions on the Outstill system where it must be retained.

77. In the North-Western Provinces certain tracts had to be removed from the operation of the Central Distillery system, and though the uniform rate of duty has been retained this has only been rendered possible by fixing the rate at a comparatively low figure, and increasing the numbers of shops so as to reduce the temptation to illicit practices.

78. In the Punjab, the Central Distillery system has been introduced and, with two trifling exceptions, maintained throughout the Province; the rate of duty is high, and it is practically uniform; on the other hand, illicit distillation and smuggling are more common than in any other Province, and the number of shops for the sale of liquor has been increased, though there is still only one shop for the sale of liquors of all kinds to nearly 10,000 of the population.

79. In 1878 the Central Distillery system was generally introduced in Bombay, but it was found necessary that it should be accompanied with the grant of monopolies and with a "minimum guarantee," the amount of the guarantee being fixed by competition. The system of a "minimum guarantee" fixed by competition is now being altered, as it was found to be open to objection in some respects.

80. In 1869 the Central Distillery system began to be introduced in Madras. It was accompanied with various conditions and special provisions

and has since been extended to nearly all the districts of the Presidency, having now developed into a system which is almost the Central Distillery system in its simplest form, and with a high rate of duty. The success of the system adopted in Madras is, however, accompanied by a large number of shops.

81. The various systems of Excise in force in British India are described in Appendix G. It would be a fruitless task to attempt to explain, in every instance, to English readers, the minute local peculiarities which render it necessary to have recourse to each system. All the systems, other than the ordinary Outstill and Farming systems, have a common object, namely, to render it possible to impose a fixed rate of duty on each gallon of spirit that passes into consumption, and in this respect they are improvements on the Outstill or Farming system.

82. Though we cannot undertake to explain fully the special reasons which lead to the local adoption of each system, we will try to make it clear why one system was adopted which has been loudly attacked on plausible grounds.

We refer to the "minimum guarantee" system which in recent years has prevailed extensively in Bombay.

Under this system the monopoly of sale and manufacture is granted to the person who undertakes to pay duty on the greatest number of gallons of spirit, and of course any such system is open to attack on the ground that it offers a direct incentive to attempts to increase the consumption of spirit. We shall show hereafter that this objection, though not without force, is theoretical rather than practical; but in the first instance we will set forth the considerations which have led to the introduction of such a system, considerations of a very different character from a mere desire to increase revenue by stimulating consumption.

83. The difficulties which render it impossible in certain tracts to maintain the Central Distillery system have already been stated in paragraph 70.

These are, briefly,—(1) the expense relatively to the amount of revenue to be collected, (2) impossibility of securing a trustworthy preventive establishment, (3) defective means of communication, (4) facilities for illicit distillation, (5) deterioration of liquor in transport, and (6) smuggling from foreign territory.

It will be obvious that these difficulties are, to a very large extent, obviated if a Farming or Outstill system be adopted. Under such a system (1) expense is reduced to a minimum, as a comparatively costly central distillery, with an establishment to watch it, need not be kept up; (2) a large preventive establishment (with its attendant risks of collusion with the distiller and oppression of the people) is no longer necessary, because the grant of a monopoly enlists, from strong motives of personal profit, the distillers and shop-keepers, with all their local knowledge, on the side of prevention; (3) the difficulties arising from defective communications are obviated, because the liquor can be distilled on the spot where it is consumed; (4) illicit distillation is checked by enlisting the local knowledge of the shop-keepers on the side of prevention; (5) the liquor can be distilled on the spot and the risk of deterioration in transport is avoided; and finally (6) smuggling from foreign territory is reduced to a minimum, because the monopolist can reduce the price of his liquor so as to exclude smuggled liquor, which must be imported from a distance and which is also handicapped by the risk of detection.

Against these advantages must be set certain evils which attend the introduction of the Farming or Outstill system, and which in many cases

would be more serious than those which it is desired to prevent. The chief of these is that the price of liquor may be greatly reduced. The object of the monopolist is simply to make the largest possible profit, and in many cases it will happen that the maximum of profit will be secured by a large sale at low prices rather than by high prices with a restricted sale. A check may no doubt be applied to this evil by fixing a minimum rate for retail sales, and limiting the capacity of the outstill, but the effective maintenance of regulations of this nature requires a strong preventive force, and in some places the enforcement of a minimum price for retail sales and the prevention of distillation in any but the licensed still are practically impossible.

84. In the circumstances described in the preceding paragraph the question naturally arises, whether it is possible to combine the advantages of the Farming or Outstill system, which may be described as the monopoly system, with those of the Central Distillery, in such a way as to prevent the sale of liquor at very low rates. This result, it was supposed, could be attained in certain tracts by granting a monopoly of manufacture and sale coupled with the conditions that the farmer shall guarantee a minimum payment by way of duty, that he shall distil only at a central distillery, and that he shall pay a fixed duty per gallon of liquor issued from the distillery. Such a system is suitable only where the chief difficulties to be overcome are illicit distillation on an extensive scale and the evils connected with preventive establishments.

85. An arrangement under which the monopoly of sale and manufacture is granted to a single person, who is required to distil in a central distillery, and to pay a fixed duty per gallon, obviates the risk of illicit distillation by the general public, but it offers to the monopolist the temptations which exist under the ordinary Central Distillery system—(1) to distil illicitly on his own account outside the central distillery, and (2) to enter into collusion with the preventive establishment to pass liquor out of the distillery without payment of duty. As a remedy the further condition of a "minimum guarantee" is imposed, or, in other words, the monopolist is required to pay duty on a certain quantity of liquor whether he can sell that quantity or not. If he sells more than the guaranteed quantity he pays duty on the excess; if he sells less he is obliged to make up the duty to the amount of the guarantee.

86. It will be obvious that if the amount of liquor on which duty is guaranteed is about equal to the amount for which there is a demand, there is no risk of illicit distillation with the connivance of the monopolists or of liquor being passed out without payment of duty. Until the amount guaranteed has been made up there is no profit to be made either by illicit distillation or by removing liquor without payment of duty, and if the amount guaranteed is not greatly less than the normal demand, the profit to be made by illicit dealings is not sufficient to induce the monopolist to run the risk of violating the law.

87. Unfortunately very great difficulty, especially at first, was experienced in determining what was the normal demand, and it was found necessary to determine by public competition the amount to be guaranteed, the monopoly being granted to an approved tenderer who undertook to guarantee the maximum quantity.

This condition is open to attack, since it may be said, with some reason, to make it the interest of the monopolist to stimulate the consumption of liquor. The objection, however, has less practical weight than might at first sight be supposed. As the number of shops is limited the monopolist could not increase consumption by multiplying shops, and as he paid a heavy duty

per gallon he could not reduce the average price of his liquor below the rate of duty *plus* cost of production, &c. The incidental attractions of lighting and so forth, employed by public houses in England to increase the number of their customers, are not available in India, and, so far as we can see, the only effective method by which the monopolist could stimulate consumption was by raising the price of liquor where the demand for it was strong, and by lowering it in places where a reduction in price was accompanied by a more than equivalent increase in consumption, the average price, as above explained, being in this way maintained.

88. But it might, and would no doubt occasionally, happen that under a system regulated by public competition the tenderer would guarantee duty on a larger quantity of liquor than he could sell at a rate per gallon not below that required to give him a profit, and in such case he would be under a strong temptation to diminish the loss on his contract by reducing the price of liquor below what it cost him, including duty, in the hopes that increased sales would diminish the excess payment under the guarantee. At any rate the Bombay Government was satisfied that the minimum guarantee system, the amount guaranteed being determined by competition, was open to such strong objection, that in the two districts of Thana and Kolaba they substituted, experimentally, a system under which the monopoly was granted to the person who undertook to pay the highest rate of duty per gallon, in excess of a stated minimum, on all spirit manufactured and sold by him. This system removed all ground for the accusation that it was made the special interest of the monopolist to stimulate consumption; but in other respects the results were disastrous. The rate of duty fixed in this way by competition was so high that a great impulse was given to illicit distillation, and as the monopolist was under no obligation to take a minimum quantity, he was not specially interested in preventing smuggling, and confined himself to selling what liquor he could at a very high price, leaving those who could not, or would not, pay his price to provide themselves with liquor by illicit means. The facts connected with this experiment were reported to Your Lordship in our Despatch No. 340, dated 22nd October 1889, but for facility of reference we have reprinted as Appendix E the account of the experiment given in a memorandum received from the Bombay Government and forwarded to Your Lordship with that Despatch.

89. On recognizing the failure of the experiment the Bombay Government directed that in future the amount to be guaranteed should be fixed by the Collector of the District and not determined by competition, and that the monopoly should be given to a person approved by the local authorities. We trust that this system may be so successful as to justify its permanent and wider adoption, but it is obviously open to the objection that it may lead to charges of favouritism being brought against the local authorities, and it may produce a loss of revenue if the monopolist can succeed in concealing the total amount of the liquor manufactured and sold by him, and in this way secures a low "minimum guarantee" which makes it profitable for him to run the risk of illicit distillation and smuggling on his own account.

We are, however, satisfied that no system can as yet be devised which will be absolutely free from objection, and we must be content to adopt that one to which fewest objections can be made.

90. We fear Your Lordship may think we have dealt at undue length with questions connected with the minimum guarantee system, but we are anxious

that some of the difficulties which we have to encounter and of the measures adopted in order to meet them should be set out at length. We have in fact only dealt in an imperfect manner with one branch of the Excise administration of a single Province, and our remarks are necessarily neither as full or complete as if the question had been dealt with by the Local Government concerned. No slight advantage of the introduction of the system of minimum guarantee lies in the fact that under this system it becomes possible to insist on proper distillation and the use of the best apparatus, with a consequent improvement in the quality of the liquor offered for sale.

91. What we have already said will, we trust, be sufficient to satisfy an impartial mind that the local authorities in India have great difficulties to meet, that they are doing their best to overcome them, that the numerous systems of Excise which prevail locally in British India have been adopted with legitimate and praiseworthy objects, and that rash interference with the Excise Administration of India might be productive of great evil. We do not claim that the Administration is perfect; we acknowledge that mistakes have been made, and that experiments have failed, but we need hardly say that we have no desire to establish different systems merely for the sake of avoiding uniformity, and it may be taken for granted that there must be reasons, of greater or less weight, for such diversity of practice as we have shown to prevail in India. A simpler and uniform system would be more easily worked, and could be more readily understood, and would thus obviate much misapprehension and criticism. Unfortunately the circumstances do not permit of our adopting such a system.

SECTION III.—OBJECTS AND PRINCIPLES OF EXCISE ADMINISTRATION.

Raising of Revenue and Regulation for purposes of Police.

92. It will be admitted that among the legitimate objects of a system of Excise are included the raising of revenue and the regulation of the trade in liquor for police purposes. These are the undoubted and, from an historical point of view, probably the primary objects of such a system. It was at a later stage that it was recognised that the regulation of the trade in liquor for the purposes of revenue and police might with advantage be so conducted as to discourage any tendency to drink to excess, and to lead to the substitution of wholesome or comparatively harmless liquor for that which was positively noxious. Up to the present time, however, there is no general agreement of opinion regarding the measures which may properly be taken by a Government for these purposes.

93. In India no special difficulty is experienced in regulating the Excise system for purposes of police, and such minor difficulties as arise in this connection are due rather to the want of an efficient agency to ensure that prescribed rules are duly observed than to any difference of opinion as to what these rules should be.

In respect of the realization of revenue, the principle to which we have given our adherence, and which has been generally adopted, is to impose as high a tax as may be possible without giving rise to illicit practices; this principle is, of course, subject to such limitations in practice as special circumstances may justify.

No general agreement regarding the extent to which Government should go in the direction of restricting the consumption of stimulants or narcotics.

94. So long as we confine ourselves to police and fiscal considerations we

deal with questions regarding which the functions of Government are defined with sufficient clearness and unanimity; on the other hand, when we endeavour to introduce an Excise system with the object of modifying the habits of the people in regard to drinking, we are confronted with complicated moral and social problems, any solution of which is impeded by obstacles both of a theoretical and of a practical nature. It is owing to an alleged failure to discourage drinking that the Indian system of Excise has been attacked, for, though it has been asserted that we especially encourage drinking for the sake of revenue, we understand this to be merely a mode of expression used for rhetorical purposes with the object of putting in a striking form the charge that, owing to our wish to increase the revenue, we do not go as far in discouraging drinking as we ought, or as those who make the accusation think we ought. Every Excise system in force in British India does, at any rate in some degree, check drinking, inasmuch as it limits the number of places at which liquor may be purchased, restricts sale within certain hours, and raises the cost of liquor by imposing a duty on it.

95. It will be obvious that when we are charged with not sufficiently discouraging drinking a wide door is opened for difference of opinion and profitless discussion so long as there is no general agreement as to the extent to which it is possible and expedient to go in this direction. The entire prohibition of the use of stimulants and narcotics (if it could be carried out) would be the most effectual means of preventing the evils which undoubtedly result from their excessive use. And there are some who advocate this extreme measure. But we are of opinion that the evil to be prevented is not of sufficient magnitude to call for, or justify, any such interference on the part of Government, and that the remedy might be attended with evils even greater than those which it was intended to prevent. It may, not unreasonably, be argued that, as a rule, people are able to decide for themselves what habits are beneficial or the reverse, and absolute prohibition would by many be regarded as an intolerable interference with the liberty of the subject.

Prohibition impossible in India, even if desirable.

96. If, in disregard of the considerations just stated, it were decided that it was expedient to attempt entire prohibition, the question would arise whether it would be possible to enforce it. Whatever might be the answer to this question in regard to such a country as England, we have no hesitation in saying that for India the answer must be in the negative. The facilities for manufacturing and obtaining spirits are so great, and the desire of many classes for stimulants so strong, as to forbid any hope that universal prohibition could be enforced. A law so much at variance with the stronger laws of habit and desire would in some cases merely create a contempt for law and a spirit of lawlessness in large classes of the population. We are not prepared to say that the use of stimulants in moderation is harmful, and total abstinence, due simply to the impossibility of obtaining liquor, and lasting only so long as that impossibility could be maintained, would, in our opinion, be far less satisfactory from every point of view than moderation in the use of stimulants due to conviction and enforced by public opinion.

97. It has been alleged that no Native of India uses stimulants in moderation, that he either abstains altogether or drinks to excess and for the purpose of producing intoxication. This assertion, though not without foundation in reference to certain classes, is of far too sweeping a character when applied to

the whole population of India. On this subject the Government of Bengal uses the following language:—

"The Lieutenant-Governor considers that he should not in this report pass over without remark the observation in Mr. Smith's speech that among the native population 'there is no such thing as a class of moderate drinkers, though there may be a few educated Natives who have adopted English habits. A Native, if he drinks at all, drinks to get drunk and he drives hard bargains with the publicans for the purpose.' Sir Steuart Bayley's experience of Bengal, and especially of Behar, where the drinking population is the largest, enables him to assert confidently that Mr. Smith has been misinformed on this point. It is not the case with the great bulk of the lower classes, who habitually use stimulants, that they drink only for the purpose of intoxicating themselves."

The same opinion is expressed by Mr. Mackenzie, the Chief Commissioner of the Central Provinces:—

"Whatever may be the case elsewhere, it is quite incorrect to say that a Native of these Provinces, who is in the habit of drinking country liquor, 'drinks only to get drunk.' As was noticed in paragraph 17 of this Administration's letter No. C—50, dated 24th September 1888, the extreme weakness of the spirit which is manufactured from mohwa by the kullars of these parts is a fairly effective check upon excess. Spirituous liquor, which is from 70° to 80° below London proof, must be consumed in inordinate quantities before intoxication supervenes: and except on festal occasions the kullar's customer is content with his glass. In fact, the only class of Native of these Provinces in respect of whom the accusation that drink is taken for the purpose of getting drunk is not a libel is, in the Chief Commissioner's opinion, the numerically small, but more influential section who have so far adopted European manners as to have cultivated a taste for English spirits. Generally throughout India it is the growth of intemperance in this class that has given rise to the complaints of Native reformers like Keshub Chunder Sen, and has seemed to give point to the charge that drinking habits are extended in India under British Administration."

Local option impracticable.

98. A consideration of the arguments just referred to, as well as of others which we need not here specify, has convinced us that absolute prohibition, and what is known as local option, are both out of the question in India. A system of local option would throw the whole administration into confusion and would in some places create an intolerable class tyranny which might have very serious political effects. We doubt greatly if a Sikh community would quietly submit to the total prohibition of liquor by a Muhammadan majority, and we believe that in some tracts local option would lead to the indefinite multiplication of liquor shops and the reduction of the rate of duty to a minimum. We have already dealt with this question at some length in our Despatch to Your Lordship, No. 157, dated 25th May 1889. As was stated in that Despatch, any system of local option presupposes the existence of a highly developed system of local or municipal institutions to which representatives are elected by the mass of the people, and in which all conflicting interests command their due share of attention. No such system exists in India.

Difficulty of ascertaining public opinion on the question of drink.

99. Putting aside the question of local option, the difficulties even in the way of ascertaining what public opinion on the question of drink really is, and of determining the amount of deference that may reasonably be paid to it, are very serious. The widest divergence exists both in respect of the extent to which the habit of drinking is practised and of the degree of disapprobation with which it is viewed, and it is difficult to determine what meaning to attach to public sentiment on the question of drinking in a locality where one portion of the community regards drinking as a social, or even religious, duty, while another portion regards the consumption of spirits in any form or quantity as a positive sin.

100. At one end of the scale there are the Muhammadans and some of the higher castes of Hindus, whose religion forbids them to consume spirit in any form. This religious precept is largely, but not by any means universally, observed by these classes, and the obligation imposed on them by caste or religion to abstain from drink has undoubtedly been weakened where English education has made progress, and European habits and modes of thought been adopted to a greater or less extent.

At the other extreme there are classes who not only habitually drink whenever they are able to do so, but, in some instances, consider the consumption of liquor as a part of their religion. The following extract from a report dated 3rd October 1888, by the Deputy Commissioner of Darjeeling, illustrates this aspect of the question :—

“In the case of all these people, with the doubtful exception of Brahmins and Khass both of whom profess to abstain from intoxicating drinks after marriage, the constant use of strong drinks is favoured by hereditary tendencies and enforced by social usage and religious prescription. Many of them have imperfectly accepted the mere externals of Buddhism or Hinduism; but the working religion which underlies these holiday creeds and really affects their daily life is the confused superstition which Sir John Lubbock calls Shamanism, and Tiele and other continental scholars are beginning to describe as Animism. Neither name is particularly happy. For our present purpose, the main feature of the Shamanistic belief is that men are surrounded by an infinite number of supernatural beings, spirits of hills, forests, rivers, diseases, ancestral ghosts, departed medicine men, and the like. These beings are active in ill-doing. They require incessant propitiation, and they love nothing so well as strong drink. This is offered in an earthen pot, or a hollow bamboo chungu. A scanty libation is poured on the earth, and the remainder, along with eatable offerings, is afterwards consumed by the worshipper. Whether the taste for liquor gave rise to this practice, or the religion developed the taste for liquor, it would be fruitless to inquire. The point is that the practice forms an essential part of the ritual of the household and family gods in the tribes and castes I have named, who make up quite 80 per cent. of the population of this district. The same obligation is recognised with equal force at marriages and funerals; and the Deputy Commissioner constantly receives petitions for leave to get in large quantities of liquor for use on these occasions.”

In August 1881 the Chief Commissioner of Burma wrote as follows :—

“The Karen race have more or less generally been allowed to distil spirit without duty at stated times of the year. The alleged reason for the concession was that the custom or cult of the Karens requires them to offer sacrifices of spirit to the ‘nats’ (spirits or demons) whom they had to propitiate. In reality all the spirit thus brewed is drunk by the Karens; but the custom is, to their minds, hallowed by long use and by religious feeling. Recently effort has been made to curtail this privilege among Karens of the more settled tracts, because the license of free distillation was said to be debauching the Karens and also impairing the Excise revenue. Representations have been made against the withdrawal of an old privilege; and these representations are in some instances supported by European officers who serve among the Karens. The tribes themselves aver that the ‘nats’ require home-made spirit, and will not accept sacrifices of liquor issued from the licensed distilleries.”

Many passages of a similar character might be given from reports which refer to other parts of India. A selection from such passages is printed in Appendix B to this Despatch.

101. Between the two extremes to which we have referred there exist in India classes of all shades and degrees of opinion and practice in regard to the habit of drinking, for whom drinking is neither enjoined nor absolutely forbidden by their religion. For example, the Sikh religion permits drinking, and many classes of Hindus, of some standing in the social scale, are not forbidden to drink either by caste rules or custom, and do in practice resort to the use of stimulants in a greater or less degree. In addition to the numerous classes, falling under this intermediate head, whose religion and opinions are of an origin independent of European influence, there are also the Europeans, the Eurasians, and the Native Christians, whose habits and opinions must be considered in framing Excise regulations.

In many places these classes live side by side, and restrictions on drink which would be viewed as beneficent by one class would be considered by others to be tyrannical, while it is obvious that an Excise system, which might be suitable for, and approved by, one of these numerous classes, would be unsuitable for the majority of the other classes.

For Muhammadans and Hindus of certain castes no special restrictions are necessary in order to discourage drinking. The habit is opposed to their religious principles and is discountenanced by the public opinion to which they are subject. It is no doubt true that some Muhammadans and some Hindus, for whom drink is forbidden by their religion, do drink secretly or openly, but this is either because they choose to disregard in this respect the principles of the religion which they profess, or because they have adopted Western habits and modes of life. In such cases any restrictions that Government could impose would be of infinitely less force than those which have been already disregarded.

On the other hand, almost all Europeans and Eurasians and many Natives of India, especially the aboriginal tribes, would regard severe restrictions on drinking as an unnecessary and tyrannical interference with their modes of living. Such restrictions would be frequently disregarded by these classes and would provoke a spirit of opposition, the strength of which is ignored by those who favour prohibition, whether enforced universally by Government, or locally and partially through the means of local option.

102. The considerations we have stated point to the conclusion that it is not merely impracticable and impossible to prohibit the use of stimulants in India, or to introduce a system of local option, but show also that it is impossible to introduce any Excise system that would be equally well adapted to all classes of the population of India and would be in complete accord with such public opinion as may be said to exist in different parts of the country. Nor could distinct and separate systems be applied to each of the several classes described or to groups of them. These classes are not distributed simply with reference to geographical considerations. The inhabitants of some districts are no doubt more given to the habit of drinking than those of others; but many of the varying degrees of disapprobation of the practice of drinking are represented in every district; and everywhere, or almost everywhere, there are both people to whom drinking is forbidden by their religion and also people for whom it is permissible and who do as a fact drink more or less whenever they can afford to do so. Any Excise regulations which could be adopted for a particular locality must necessarily fail to be suitable and acceptable in respect to at least some portion of the inhabitants.

Policy of the Government of India in matters of Excise.

103. Looking to all the conditions of the very difficult problem with which we have to deal, we have, after careful consideration, arrived at the conclusion that the only general principles which it is expedient or even safe to adopt are the following:—

- (1) that the taxation of spirituous and intoxicating liquors and drugs should be high, and in some cases as high as it is possible to enforce;
- (2) that the traffic in liquor and drugs should be conducted under suitable regulations for police purposes;
- (3) that the number of places at which liquor or drugs can be purchased should be strictly limited with regard to the circumstances of each locality; and

- (4) that efforts should be made to ascertain the existence of local public sentiment, and that a reasonable amount of deference should be paid to such opinion when ascertained.

These are the principles which have been laid down for the guidance of local authorities by the Government of India in the past, with the single exception that the arrangements for ascertaining public sentiment were imperfect and not authoritatively imposed.

104. The omission to lay down positive orders of universal application regarding the deference to be paid to popular sentiment in particular places was not due to oversight. The question had been considered more than once, and notably by Lord Northbrook's Government, in 1874; but the difficulties surrounding the whole subject were so great that it was deemed inexpedient to issue general orders at that time, and the matter was left to the discretion of the Local Governments which were necessarily in the best position to say what rules were required or could safely be followed. The steps we have recently taken in the direction of providing that public opinion shall be consulted have already been explained in our Despatch No. 157, dated 25th May 1889, and Your Lordship has approved them in Despatches No. 67, dated 18th July, and No. 113, dated 21st November 1889. The following is a copy of the instructions which we have issued :—

"2. It will be observed that, in the opinion of the Government of India, the best method of ensuring that due regard shall be paid to local public opinion in the matter of licensing liquor shops consists in the issue of appropriate instructions to the officers to whom the Excise administration of districts is entrusted. The Government of India do not consider that it would be useful at present to issue any general instructions on the subject applicable to all provinces, but desire that the several Governments may give the matter careful attention, and after consideration of the measures in force and the experience gained in other provinces, as described in the enclosures of this letter, take such steps to secure the object in view as may seem suitable. The Government of India are inclined to think that the procedure adopted in Bengal, where distinct instructions have been given to the licensing officers to ascertain and consider local opinion, and directions have been issued that where municipalities exist the Municipal Commissioners should be consulted in determining the location of shops, might be generally followed with advantage. But having regard to the varying conditions of different provinces, it has been thought desirable for the present to leave to Local Governments full discretion to decide what measures are expedient in each case."

We have found it necessary merely to indicate the general line of policy to be followed in this matter, leaving the Local Governments at liberty to carry out that policy in the manner which, with reference to local conditions, seems likely to secure the most satisfactory results.

105. The practical measures which we propose to adopt in future in furtherance of our declared policy comprise (1) the abolition of the Farming or Outstill system in places where it is found practicable to do so, (2) the gradual introduction of the Central Distillery system in its least complex form, (3) the imposition of as high a rate of duty on country liquor as it will bear, subject to the limitation that such duty shall not exceed the tax levied on imported liquor, and (4) the restriction of the number of shops. Where the Outstill system is retained we shall, as far as possible, enforce the limitation of the capacity of the still, and in some instances a minimum selling price.

We do not anticipate that the carrying out of this policy in a rational manner and with reasonable regard to the circumstances of the country will lead to any loss of revenue. On the contrary, we believe it will be as successful from the financial as from every other point of view.

APPENDIX G.

DESCRIPTION OF THE VARIOUS SYSTEMS OF EXCISE IN FORCE IN
BRITISH INDIA.

1. Before the advent of British rule the limitations imposed on the manufacture and sale of liquor, when occasional and limited attempts at total prohibition in a few places had proved unsuccessful, were devised with the sole object of raising revenue and without any design of regulating or controlling consumption. And it may be stated with complete, or almost complete, accuracy that the system in force was that of farming, the right of manufacture and sale being given to the highest bidder and no restriction being placed on the number of shops or their position. Under British rule attempts were made to modify and improve the system, but the measures adopted to introduce the desired regulation and control were worked out in each province separately with reference to local peculiarities, and by officers having as a rule only local experience, and possessing no knowledge, or only a very general knowledge, of what was being done in other provinces. The result has been to bring about many shades of difference in systems bearing a general resemblance and, in not a few cases, to cause different names to be applied to systems identical in all essential particulars, while sometimes the same name has been given to systems which differ in not unimportant respects.

2. For practical purposes the spirits consumed in India in the present day may roughly be divided into three classes—(1) Imported spirits, (2) Country spirits, and (3) Spirits manufactured in India after the "European method." "Country spirits" include spirits manufactured in India by the rough and careless methods which have long prevailed. Spirits manufactured after the "European method" are spirits manufactured in India as carefully as spirits are manufactured in Europe. The distinction is one which it is not easy to draw in all cases, but it has been found convenient to maintain it, because the more carefully manufactured spirits, ordinarily consumed by a wealthy class, can be made to bear a higher rate of duty.

3. The numerous systems applicable to country spirits may be divided into two main groups:

- (A) Those under which a fixed duty is levied on each gallon of spirit manufactured and issued for sale.
- (B) Those under which the tax is not thus directly proportioned to quantity, but is levied in the gross by payments the amount of which is usually fixed by competition.

The general designation for the first group is the Central Distillery system and of the second group the farming and outstill system.

The Central Distillery System.

4. The system to which the name of "Central Distillery" was first applied, and perhaps the simplest form of the group, is one under which a central distillery is maintained by the Government, and any approved person is allowed to set up a still in the building and to manufacture spirits under the supervision of the officials attached to it: the distiller pays the fixed duty on each gallon of manufactured spirit which he passes out of the distillery: in addition to the duty, which varies in different provinces and districts, the distiller is usually required to pay a rent for the use of the building, or a small fee to cover the cost of the building, and establishment: no monopoly of manufacture is created, and the right to manufacture is kept distinct and separate from the right to sell.

5. A Central Distillery system of this character is in force in Lower Bengal, the North-Western Provinces and Oudh, and the Punjab; also in Burma where, however, it is applied only to spirits manufactured after the "European method." This system is, in all essential points, and as nearly as may be, the same as that which prevails in Great Britain.

6. The same system is in force in the Central Provinces, with this difference that the fixed duty is levied not on the quantity of manufactured spirits, but on the quantity of material used for distillation. This difference in the mode of calculating the duty, though not necessarily in the duty, is due to the fact that it is considered easier to ascertain the quantity of material than the quantity of spirit, which being less in bulk is more easily smuggled, and also to the fact that practical difficulties are experienced in testing, and securing an accurate record of, the strength of the spirit.

7. Under the system just described the number of shops and the precise locality of each shop are fixed by the district authorities. The sale of liquor at any place other than these shops is forbidden. License fees are charged for the right to sell at the shops, of which the number has been limited as above stated. The method of levying those fees varies in the

provinces named and in different portions of the same province. The fees are in some places fixed annual or monthly amounts, in others the amount is determined by competition at auction or by tenders. The shops are generally disposed of separately, but occasionally they are disposed of in groups for certain areas. The strict limitation of the number of shops causes the right of sale at a shop to be in many cases a source of large profit, and the right of sale is consequently disposed of by competition to approved persons, because in no other way could that profit be obtained as revenue for the State.

The "Free Supply" System of Madras.

8. The system known by the somewhat misleading name of the "Free Supply" system which prevails in Madras is very similar to that just described. Under it the right of sale and of manufacture are kept distinct, and no monopoly of the latter is granted, while the regulations regarding sale are as stated in paragraph 7 of this Appendix. It differs from the ordinary Central Distillery system in that no distillery is maintained by the Government. Any respectable person is allowed to establish a distillery of his own on payment of the prescribed fixed fee, and in it to manufacture liquor under the supervision of excise officers.

9. This is the system which now prevails in the greater portion of the Madras Presidency, where it is being extended and, where it is being worked with great success from every point of view. The term "Free Supply" is applied to it in order to give prominence to the fact that a licensed shopkeeper may obtain his supply of spirits from any distiller, whereas under the superseded systems each shop was required to draw its supply of liquor from a particular distillery.

10. In the town and island of Bombay both the ordinary Central Distillery system as described in paragraph 4 of this Appendix and the Madras "Free Supply" system are in force, the former being applied in the case of spirit distilled from toddy and the latter in the case of spirit distilled from mohwa.

The System of Monopoly Supply.

11. The Madras "Monopoly Supply" system resembles those described in paragraphs 4 and 8 of this Appendix in keeping the right of manufacture and of sale distinct and in the regulations regarding sale, but differs from them in that a monopoly of the right of manufacture for the supply of a certain area is granted. The grant of the monopoly is determined by tenders; the rate at which the manufacturer is to supply liquor to the licensed vendors is fixed, and the monopoly is given to the tenderer who agrees to pay out of that charge the highest sum to the Government as still-head duty. The monopolist distils in his own private distillery as under the system described in paragraph 8. This system now prevails only in a few districts of Madras.

The Guaranteed Minimum System.

12. The next form of the Central Distillery system which we shall describe is that which has lately been introduced in the greater portion of the Bombay Presidency, though modifications of importance are now being made, which are likely to be made applicable universally. Under it, the right of manufacture and of sale are disposed of together, being granted to a monopolist for a district or smaller area: the monopolist is required to manufacture in a distillery maintained by the Government under the supervision of the excise establishment, the cost of which he is required to pay: on each gallon of liquor issued from the distillery he pays the fixed duty prescribed for the district: the number and locality of the shops at which he may sell the liquor he manufactures are fixed: and limits for the retail prices to be charged at those shops are fixed by the Government: the grant of the monopoly is in most districts determined by tender, the subject of tender being the number of gallons on which the tenderer will undertake to pay still-head duty: the successful tenderer is required to pay the still-head duty on that number of gallons in any case, and on any number in excess of that which he may actually issue.

13. This system is in force in Ajmere as well as in most of the Bombay Presidency. It was also in force for several years in a large part of Madras, but it has now been superseded there chiefly by the system described in paragraph 8 of this Appendix.

The Modified Distillery System.

14. Another form of the Central Distillery system is one under which a monopoly of the right both to manufacture and to sell liquor is granted, but instead of guaranteeing the payment of duty on a minimum number of gallons, the tenderers offer to pay a lump sum

addition to the fixed duty on each gallon, and the monopoly is granted to the highest tenderer: in other respects the conditions are generally as stated in paragraph 12.

15. This system is in force in a few districts of Madras. It was also that which was introduced in a very few places in the North-Western Provinces under the name of the "Modified Distillery System;" but after the experiment known by that name had been tried for a few years and found unsatisfactory, the Bombay condition of a minimum guarantee was added in most of the few places in which the system was allowed to continue.

Experiment in Thana and Kolaba.

16. A system similar to that of paragraph 14, called the "extra percentage" system, was tried for two years in two districts of Bombay—Thana and Kolaba. There, instead of the tenders being for the payment of a lump sum, they were for the payment of an extra duty per gallon. The upset rates of duty in those districts were fixed at a high figure, and the rates were increased so much by competition in the tenders for the "extra percentage," that the high price of liquor led to a great increase in illicit distillation, and the excise administration of the districts was thrown back to the level of many years ago: the experiment has been abandoned and the "minimum guarantee" system introduced with the modification that the amount guaranteed is not fixed as the result of public competition.

The Tree-tax.

17. In Madras and Bombay, where spirit is distilled to a great extent from toddy—the juice of the palm-tree—there is a tree-tax on every tree which is tapped for distillation, as well as a direct tax on the quantity of liquor distilled.

The Contract Still System.

18. A system which may be described as lying in the middle land between the Central Distillery system and the Outstill system, but which is closer to the former than to the latter, is that known as the "Contract Still" system in the Central Provinces. A distillery is maintained by the Government, and any approved person is allowed to set up a still of a known capacity in it, being required to manufacture under a limited supervision by the excise officers, and to pay a fee, proportioned to the capacity of the still, for each day it is used. The right of sale in the area supplied from a contract still is disposed of separately in the same manner as under the Central Distillery system of the Central Provinces.

19. In one small tahsil in the Punjab a system, bearing a great resemblance to the Contract Still of the Central Provinces, has just been introduced. A full description of this with the reasons for the step, is given in extract (14) of Appendix D. The right to manufacture spirits for the tahsil has been sold to a monopolist for a fixed sum, which entitles him to manufacture a certain quantity of spirit—the quantity estimated as the consumption of the area—licit and illicit—in the last few years: for any liquor distilled in excess of that quantity he will be required to pay a fee for each time the still is used. The right of sale is disposed of separately in the manner usual in the Punjab.

The Farming System.

20. Under all the systems in group B, mentioned in paragraph 8, the right of manufacture and of sale are disposed of together. Originally an unrestricted farming system prevailed in India, and the monopoly of manufacture and sale in a certain area was granted in return for the payment of a lump sum, the monopolist being allowed to manufacture how and where he pleased, to open as many shops in any location he desired, and to sell at such prices as he chose. This system does not now exist, and has not existed for many years, in any part of British India.

21. Wherever the farming system is now in force in British India the number and location of the shops and stills is fixed before the contract is disposed of, and the right to manufacture and sell liquor in a defined area is sold by auction or by public tender: sometimes maxima and minima retail selling prices are fixed: in some places also the strength of the spirit which may be manufactured is defined and the amount manufactured and the consumption are recorded. This system is in force in some districts of the North-Western Provinces and Oudh, in a few districts of Madras, and in still fewer districts in Bombay, in which last it is known as the "outstill" system.

The Outstill System.

22. Next comes the Outstill system properly so called. The difference between this and the Farming system, described in the preceding paragraph, is that each still, usually with one shop only attached, but sometimes a slightly larger number, is disposed of separately. The

right to manufacture at the outstill and to sell the spirit there manufactured is sold by auction to the highest bidder. And in the original form of this system the control over the monopolist is confined to ensuring that he manufactures and sells only at the places mentioned in his contract. This system is in force in Assam, Burma, and part of the North-Western Provinces and Oudh, and till recently it was the system which prevailed most extensively in Lower Bengal.

23. But wherever it is still considered necessary to maintain the outstill system, the attempt is being made to subject the licensee to greater restriction and more control than exists in the simplest form of the system. A description of the more important of the measures designed to effect this will be found in Chapter X of the Report of the Bengal Excise Commission: they are chiefly the limitation of the capacity of the fermenting vats and stills and of their total annual outturn, the regulation of the strength of liquor manufactured, and the enforcement of minima retail prices. In Bengal this regulated system is being annually extended, and the number of places in which the less satisfactory system described in the last paragraph prevails will be gradually reduced until it disappears altogether. The other Governments, in whose jurisdiction the outstill system is still a necessity, are also considering the possibility of introducing similar improvements. The outstill system in force in two tahsils of the Kangra district in the Punjab is of this regulated kind rather than of that described in the preceding paragraph.

APPENDIX H.

SKETCH OF THE HISTORY OF EXCISE ADMINISTRATION.

1. On the subject of excise before the days of British rule the information is scanty. But there is enough to show both that the habit of drinking, and even excessive drinking, was not unknown, and that the native rulers realised revenue from excise. It would serve no useful purpose to go deeply into the history of the pre-British period, but one extract is given which is in point. It is from a translation from the *Turikh-i-Firuz Shah* (History of the reign of the Emperor Firuz Shah), published in Volume XXXIX of the Journal of the Asiatic Society.

* * * * *

"After several days' and nights' deliberation the conclusion arrived at by these councillors was, that the cause of the revolts was comprised in four things;

* * * * *

Secondly, wine, for people are in the habit of having parties for the purpose of wine-drinking when they disclose their most secret thoughts to each other, make confederates and hatch conspiracies;

* * * * *

[Thirdly, with the view of preventing revolts in future, the drinking and the sale of wines were prohibited. Afterwards the Sultan also prohibited *bagui* and hemp (*bhang*), as also gambling. Great exertions were made to carry out the prohibition of the sale of wine and *bagui*, and special wells were constructed to serve as prisons. Drunkards, gamblers, *bagui*-vendors were driven out of the city into the country, and the enormous taxes which the State had derived from them had to be struck off the revenue books. The Sultan, first of all, gave the order to remove from the social assembly-rooms of the palace all decanters, *ma'baris*, the porcelain vessels painted with gold, and the glasses and bottles. All were smashed, and the broken bits were thrown in heaps before the Badáon gate. The bottles of wine were also taken from the assembly-rooms and poured out, and the quantity of wine thus thrown away was so great that pools and puddles were formed as in the rainy season. The Sultan Aláuddin also discontinued his wine assemblies, and he told the Maliks to mount elephants and go to the gates of the city, and into the streets and the districts, the *bázars* and *sarais*, and proclaim that it was his order that no one should drink or sell wine, or have anything to do with wine. Decent people gave up wine-drinking as soon as the order was published, but shameless ill-disposed wretches, pimps and panderers, erected stills (*Hind. bhatti*), and distilled spirits from sugar and drank and sold wine in secret; or they filled leather bags outside the town with wine and put them between loads of grass or fuel, or had recourse to other tricks of conveying wine into the city. The spies made strict inquiries, and the guards at the gates and the runners (*barid*) posted there examined every one, and seized the wine and the owners and took them before the palace. It was then ordered to give the wine to the elephants of the Imperial stables to

* Delhi.

* * * * *

drink; and such as had sold it, or smuggled it into the city,* or had drunk any, were beaten with sticks, and fettered, and put into prison, where they were detained for some time. But as the number of the prisoners increased very much, they made wells before the Badáon gate at a place where all people pass by, and into these wells all were thrown that drank or sold wine.]

"Some from the distress and misery they suffered in the wells died there, while others who were released after a time, came out half-dead, and it took ages for them gradually to recover their health and pull up strength. Many, therefore, through fear of imprisonment abjured the use of wine, and if they were unable to control their appetites they used to go [to the fords] of the Jamna, and the villages ten or twelve *kos* off, and drink it there. In Ghiáspur, however, and Indarpat, and Kilukhari, and the villages four or five *kos* away, as well as in the *sarais* outside the town, the sale and purchase of liquor was no longer feasible. It is nevertheless certain that some reckless individuals continued to distil wine at their own houses, and to drink and to sell it, and ultimately suffered disgrace and infamy, and were cast into prison.

"When the prohibition of the use of wine began to press too severely, the Sultan gave orders that if any one distilled spirits privately, and drank the liquor in seclusion, without having a party or assembly and without selling it, the spies were not to interfere with him nor enter his house nor apprehend him."

A tax on spirituous liquors appears among the lists of taxes of the Muhammadan period.

2. This extract and others which could be made from Muhammadan historians show that at times drinking prevailed even among Muhammadans, and that revenue was derived from the taxation of it. As to Hindus and the period of Hindu rule, there is similar evidence, for which we may refer to paragraph 7* of the Report of the Bengal Excise Commission, where authorities are quoted to show "that spirits and other intoxicating drinks have been extensively used in India at all times and by all classes," and that the practice was made a source of revenue in Hindu India:—

* "7. The use of spirits among the ancient Hindus.—Dr. Rajendralala Mitra, in a very learned and interesting paper contributed by him to the Asiatic Society's Journal, Volume XLII, Part I, for 1878, shows conclusively by a profusion of instances taken from

Sanskrit literature, ancient and mediæval, that spirits and other intoxicating drinks have been extensively used in India at all times and by all classes. He states indeed that their use had been condemned by moralists and lawgivers, but he proves that rice-spirit was sold and drunk and used in sacrifices in the earliest Vedic times; that the leading characters of the Mahābhārat were addicted to strong drinks; that the Rāmāyana frequently notices spirit-drinking with evident approbation; that in the time of Kālidāsa drinking seems to have been very common not only among men, but even among women of high rank; that the Purānas abounded in descriptions of spirits and of drinking; and that the Tantras afford the most indubitable proofs of a strong attachment on the part of a large section of the Hindus to over-indulgence in spirituous drinks. He also gives descriptions of the different kinds of spirits, of the materials from which they were made, and of the manner of making them, which will be referred to in succeeding parts of this report. He does not, however, write on the question of their being made a source of revenue in Hindu India, and it is understood that he is of opinion that they were not taxed. Other authorities, however, of great weight are of a contrary opinion; but there seems to be no direct evidence on this point beyond the alleged fact that all articles sold in shops were subject to taxation. Now in the Buddhist drama Naga Nunda there is mention of a spirit-shop, and there are similar references by Kālidāsa and elsewhere noticed by Dr. Rajendralala. There are also many references to the use of spirit in Buddhist works, and it was stringently prohibited in Buddhist scripture. Reference to the subject will be found in Hodgson's *Languages, Literature, and Religion of Nepal and Thibet*; in Spence Hardy's *Eastern Monachism*; in Bishop Bigandet's *Life or Legend of Gautama*; and in the second volume of Burnouf's *Lotus de la Bonne Loi*.

Bengal.

3. In Bengal, in the period immediately preceding British rule, the tax on spirits and drugs was for the most part levied, like other taxes, through the agency of the zemindars or tax farmers; and the Bengal Excise Commission recorded their opinion that under that system "it is probable that there was a practically unrestricted system of outstills paying very low rates in many places." In other words, the system which the British Government found universally in force in Bengal was the worst form of the most inefficient system that has ever prevailed in the country. This system was necessarily continued for some time under British rule: under it the price of spirit was less than it has ever been anywhere in Bengal since the modern excise system was introduced in 1790, and complaints were then rife about the spread of drunkenness among the lower classes of the people.

4. In 1790 the Bengal Government determined, on moral grounds, to resume from the zemindars the right of collecting duties on spirits and drugs, the immoderate use of spirituous liquors and drugs, "which had become prevalent among many of the lower orders of people owing to the very inconsiderable price at which they were manufactured and sold previous to 1790," being stated in the preamble of one of the Regulations as a reason for the new rules. This was the first step taken in the direction of reform, and the ground then gained has never been lost, as the number of shops has since that date been always limited by Government and not left to be settled as caprice or the cupidity of individual land-owners dictated. The Regulations issued between 1790 and 1800 prohibited the levying of a tax on the manufacture or sale of liquors except on the part of Government, and manufacture or sale without a license from the Collector: a daily tax was levied on each still, and the officials were instructed to reduce as much as possible the number of licenses, and to fix on stills the highest rates which could be levied without operating as a prohibition. The system thus introduced was the outstill system of paragraph 22 of Appendix G: each license was for one still only.

5. In 1813 an attempt was made to introduce central distilleries in large towns, outstill licenses being prohibited within eight miles of any such distillery. Twenty-one central distilleries were opened; but after a few years' experience the opinion was formed that the measure had not in general been productive of the advantages expected to be derived from it, and the distilleries were closed in all districts except five.

6. After 1824 the farming system, with apparently the restrictions mentioned in paragraph 21 of Appendix G more or less strictly enforced, was tried, and the system was extended to nearly the whole province.

7. This in its turn was found to be open to objection, to lead to an encouragement of consumption, and to involve a sacrifice of revenue, by which the farmer alone benefited; and from 1840 changes were introduced which resulted in the general re-introduction of the outstill system except in a few places where central distilleries were continued.

8. In 1856, by Act XXI of that year, the Excise Law of Lower Bengal and the North-Western Provinces was consolidated and amended. The manufacture of spirit after the English method was confined to duly licensed distilleries, and the rate of duty on such spirit was fixed at one rupee a gallon: the customs duty on imported spirit was then Rs 1-8 a gallon. Collectors were to issue licenses to any person for the manufacture of country spirit: they were also authorised to establish distilleries for the manufacture of country spirit and to fix

limits within which no liquor, except that manufactured at such distillery, should be sold, and no stills established or worked. There is no mention in the Act of the levy of a fixed rate of duty per gallon on the produce of such distilleries; the Boards of Revenue were merely given a general power to prescribe the conditions on which spirits might be manufactured at them. The levy of a tax or duty on licences for retail sale was prescribed, and generally wide powers were given for the restriction and taxation of the trade in spirits and drugs.

9. In 1859 the Government of India suggested to all Local Governments the expediency, on moral and fiscal grounds, of extending the Central Distillery system, with a fixed rate of duty per gallon, to many populous localities, if not universally. The Bengal Government adopted this view, thinking that the measure would render it possible to increase the rate of tax and discourage consumption. The system was accordingly introduced almost universally throughout the province in the next few years, the objections of local officials that in many places the system could not be worked successfully being overruled.

10. Before the end of the decade numerous objections to this wholesale measure were forced on the attention of the Government, and in 1874 several memorials praying that steps might be taken to counteract the growing increase of drinking and drunkenness were received. The objections to the universal adoption of central distilleries were so strong that it was decided to re-introduce outstills in certain places; from 1871 steps in this direction were taken, and after 1877 the reaction was carried to very great lengths, and outstills again became the general rule, central distilleries being the exception.

11. A few years' experience of this system proved that while it was not open to the objection of forcing the people to illicit practices, it was open to that of insufficiently discouraging drinking, as, in some cases, it admitted of liquor being sold at very low rates. This consideration led to the appointment of the Bengal Excise Commission, and since the Report of that Commission was received the Government has been engaged in correcting the evils arising from the excessive reaction in favour of the outstill system: the Central Distillery system is being re-introduced wherever there is a prospect of its being worked with satisfactory results: and the measures for regulating outstills recommended by the Commission are being adopted.

12. This brief notice of Bengal is sufficient to show that since 1790, when the worst conceivable system existed, having been taken over from the previous Native Government, attempts have been continually made to introduce the sounder and more scientific practice of levying a fixed duty on each gallon of spirit, and that the errors committed have generally been the introduction of reforms in too great haste, and the consequent reaction and reversion to stricter systems which invariably followed. The question of the comparative merits of the central distillery and the outstill in particular localities is one on which there may be, and is, great difference of opinion, because their relative advantages cannot be tested by figures. The danger of the immediate future is that the reaction against the outstill system may now be carried too far. But one branch of the excise question refers to the number of shops, and the rates of duty. If the number of shops has not been increased, and the rates of duty not lowered, still more if the number of shops has been reduced and the rate of duty raised wherever a fixed duty is levied, it will be clear that in these respects at least there has been no relaxation in the restrictions on drinking.

13. The number of shops for the sale of all kinds of liquor and drugs are shown in the following table for each year since 1870:—

	Distilled liquor, of all kinds.	Drugs.	Tari.	Pachwai.
1870-71	8,193	16,565	21,670	1,687
1871-72	8,937	16,615	21,689	1,815
1872-73	7,271	17,119	22,351	1,846
1873-74	6,812	19,975	22,873	2,006
1874-75	6,152	9,240	19,424	1,863
1875-76	5,294	7,424	19,265	1,661
1876-77	5,183	7,002	18,844	1,677
1877-78	5,267	7,248	19,077	1,717
1878-79	6,751	6,909	19,048	1,739
1879-80	6,878	6,877	21,579	2,006
1880-81	7,369	7,145	25,563	2,034
1881-82	6,874	6,796	30,266	2,135
1882-83	6,634	6,499	30,311	2,169
1883-84	5,740	6,513	20,138	2,259
1884-85	5,502	6,291	19,577	2,168
1885-86	5,298	6,005	19,555	2,163
1886-87	5,310	5,922	19,471	2,105
1887-88	5,112	6,059	19,051	2,157
1888-89	4,539	6,002	18,467	2,203

14. From the above it will be seen that there has been on the whole a decrease in the number of shops for the sale of distilled liquor—the shops for the sale of Central Distillery spirit, outstill spirit, spirit manufactured after the European methods, and foreign imported spirit being shown together,—and that since 1840 the decrease has been steadily progressive: the number in 1847-88 was 4,539 against 7,360 in 1880 and 8,937 in 1871.

15. It has not been considered necessary to reduce, in the same degree, the number of shops for the sale of the less noxious fermented drinks, tari, and pachwai: the number of shops for the sale of tari appears large, but many of them are for the sale of fresh unfermented toddy, a drink which we should not consider it necessary to subject to any regulations were it not that it ferments in a few hours, and after it has been drawn for 24 hours, contains a considerable percentage of alcohol.

16. The decrease in the number of shops for the sale of drugs has been even more striking than in that of liquor shops, the number being 6,092 in 1888 against 15,565 in 1870 and 17,119 in 1872. The increase in the last two years is apparent only, as it is due to licenses to druggists to sell opium for medicinal purposes having been included in the number of opium shops for the first time in 1887-88; the number of those licenses was 384 in 1887-88 and in 1888-89.

17. The rates of duty vary in the different districts in Bengal. A statement of the variations in the several districts will be found in Appendix F. An examination of that statement will show that it may be broadly stated that in Bengal the rates of duty have been doubled since 1870.

BOMBAY.

18. The records of the earliest days of the Peshwa's rule in what is now the Bombay Presidency do not show that any revenue was derived by the State from sale of spirits. But there are entries in the accounts of the middle of the eighteenth century showing that taxes were levied on the manufacture and vend of spirits in certain villages and subdivisions; and from the accounts of subsequent years, it appears that in almost every district spirits became by degrees a source of revenue to the Government, or of income to the Peshwa's officers. In some districts the monopoly of manufacture and sale was let in farm; in others—chiefly the districts on the coast, where spirits were considered a necessary of life to the cultivator, and the number of shops was very large—a tree-tax or still-tax and a shop-tax were levied. There is record of total prohibition in two districts only, Poona and Naggur, and in them the prohibition would appear to have been confined to the two cities only. The revenue derived from spirits by the Peshwa was never large, but it increased steadily till the fall of the dynasty. Drunkenness was a criminal offence, and even moderate drinkers were also punished if their caste rules forbade such indulgence.

19. In the portion of Bombay acquired by the commencement of this century, the tree-tax on date and brab trees in force under the Peshwa's rule was continued, as was also the farm of the monopoly for the sale and manufacture of mowra spirit, toddy spirit being included in the same monopoly. As it was found that the consumption of spirit increased under this system, a daily tax system was introduced in 1808 in Salsette and Surat, under which a tax was levied on each still, the distiller having the right both to manufacture and to sell, as under the Bengal outstill system. Difficulty being encountered in bringing every still under the operation of the law, in 1816 the Central Distillery system was introduced in Salsette (with a duty of four annas a gallon) and in the city of Surat (with a duty of ₹20 per six maunds of material), while outside the city the farming system was reverted to. The Central Distillery system has been continued at Surat ever since; but in the other places where it was introduced it was abandoned in 1827 in consequence of the expenditure on the numerous distilleries being found to be too great to admit of their continued maintenance.

20. In the territories which were added to Bombay at a later date, the farming system was found in force, except in some of the coast villages of the Southern Concan; and it was continued. Central distilleries were, however, opened in the cities of Ahmedabad and Broach.

21. In 1827, Regulation XXI, which remained in force, supplemented by other laws, till about twelve years ago, was passed. The first measure attempted under that law was the levy, in the tracts of the Northern and Southern Concan, on the coast, of an impost of eight annas a gallon, the right to collect the duty being let in farm. The Bhundarees (hereditary distillers) resisted this by a general strike, and were successful. The impost was abandoned, and from 1829 the Bhundarees were merely required to sell the liquor they distilled at a fixed price to the farmer, who had the monopoly of retail sale. In one of those tracts, Ganjam, a system called the "outhputtee system" sprang up: under it the farmer levied from the Bhundarees a tax which varied according to the number of trees tapped; the Bhundarees had then the right to distil and sell without further restriction.

22. The excise arrangements introduced under Regulation XXI of 1827 stood as follows in 1832 :—

Central distilleries were maintained in the cities of Ahmedabad, Broach and Surat, a fixed duty per gallon being levied.

In districts where cocoanut, brab and date-trees did not grow, and in the portions of the Surat district where these trees grow, the right to manufacture and to sell spirits was farmed, the monopoly including in Surat the right to purchase toddy extracted by the Bhundarees.

In other districts where these trees grew, except the sub-divisions of Ganjam and Barkote, the monopoly of the retail sale of spirits and of the right to purchase spirits manufactured by the Bhundarees was farmed.

In Ganjam the "outhputtee" system above mentioned prevailed. In Barkote a ground-rent on all trees tapped for distillation was levied directly by Government officials.

23. A central distillery was opened at Kaira in 1834-35.

24. From about that year excise questions received more general consideration than before, and in 1837 a Committee was appointed to advise the Government on the steps to be taken to improve the excise administration. The Committee was unable to propose any general scheme which would be an improvement on the farming system, and recommended its continuance with modifications, such as reducing and limiting the number of shops and stills, and the freeing raw toddy from any tax except the ground-rent on the trees. The Government reiterated, and called the attention of all officers to, the principle that any loss of revenue should be cheerfully borne if any means could be devised for restricting the consumption of spirit without encouraging smuggling. Many schemes were brought forward, the grant of the farms to men whose morals and philanthropy were to be the guarantee that they would not force consumption being actually tried; and the general establishment of central distilleries was especially considered: the theoretical soundness of that system was admitted, but it was held that its introduction was impracticable.

25. In 1852 an Act was passed to remove the most prominent defects of the Regulation of 1851, and a general power was given to the Government to introduce any system where local circumstances required special treatment. The Revenue Commissioners were requested to submit a report detailing the arrangements necessary to give effect to this law; and they submitted two reports—the first in 1852 and the second in 1855; they recommended the general continuance of the farming system and framed forms of licenses and passes in which were embodied various restrictions and conditions. The recommendations were accepted by the Government, and the letting of the farms by sub-divisions or districts (the farming system of paragraph 21 of Appendix G) was declared to be preferable to letting them by single stills or shops (the out-still system of paragraphs 22 and 23 of Appendix G). This system was accordingly adopted in most places, though in some the Collectors found it so unsuited to local circumstances that they continued their previous special arrangements.

26. In 1854-55 the central distillery at Kaira was closed. In 1856 distilleries for the manufacture of spirits intended for transport to other districts were opened at Bhandoop and Caranja. In 1857 the Government declared its future policy to be the letting by auction of each shop, with its still, separately. In 1859 the duty at all the central distilleries was raised to one rupee a gallon.

27. In 1861 the Government appointed a Commission to collect information on the subject, to propose a policy having for its primary object the check of intemperance, excise being regarded as a source of revenue to be increased only so far and by such measures as are clearly not calculated to stimulate artificially and by State agency the use of intoxicating liquors and drugs. The place of the Commission was ultimately taken by an officer on special duty, Mr. Bell, who presented his report towards the end of 1869. The discussions thus begun in 1864 lasted several years, and though in the interim Act IX of 1867 was passed to regulate the excise administration of the Town and Island of Bombay, and various improvements were introduced in different districts, the farming system continued to be that generally in force up to 1878. In 1875 or 1876 the discussions began which ultimately resulted in the passing of Act V of 1878. Under that Act and with a separate Abkari Department, the system has been revolutionised, the old farming system abolished nearly everywhere, and the central distillery system, in the form described in paragraph 12 of Appendix G, with high rates of duty varying in each district and which have been increased from time to time, introduced in its place. Reforms are still being vigorously introduced in the Bombay Presidency, and there the general complaint of the people is not that the administration encourages drinking, but that it is too severe in its restrictive measures and enhances the price of liquor to a height which the distillers and the people resent.

28. The following table shows the number of shops in Bombay for a series of years :—

	Distilled Liquor of all kinds.	Toddy.	Drugs.
1874-75	3,833	1,137	...
1875-76	3,819	1,226	...
1876-77	3,876	1,271	...
1877-78	3,738	1,294	1,273
1878-79	1,973	894	1,350
1879-80	3,295	553	1,322
1880-81	3,436	657	1,296
1881-82	3,499	..	1,320
1882-83	3,149	913	1,274
1883-84	3,568	1,201	1,264
1884-85	3,440	1,076	1,292
1885-86	4,667	1,326	1,290
1886-87	3,677	1,241	1,306
1887-88	3,348	1,681	1,295

29. It will be seen that while the number of toddy shops for the sale of fresh and fermented toddy has increased, and that of drug shops has remained steady, the number of liquor shops has on the whole been decreased.

30. As in Bengal, the rates of duty in Bombay vary in each district. A statement of the progressive increases in the rates we therefore refer to the enclosures of the Bombay Government's letter appended to this Despatch. It will be seen that ever since 1877 the Bombay Government has been steadily raising the rates of duty as circumstances permitted towards that fixed for imported spirits by the Tariff. The increases are of more importance than in Bengal, because the area covered by the Central Distillery system is much larger; in the period for which figures are given nearly the whole of the Presidency has been brought under that system, and the Farming system abolished.

PUNJAB.

31. In the Punjab during the Sikh times there was no regular Excise system. There was nothing resembling still-head duty, but a duty was levied in many places in the shape of license fees. In rural circles there were no licensed monopolies for the sale of liquors, and any one who wished could distil liquor at his own house without let or hindrance. For minor shops no duty was levied; but in large cities an annual fee was levied for distillation and sale. For these fees there was no fixed scale; they were fixed and levied by the local officials. The Sikh Chiefs were allowed to distil liquor in their own houses for themselves and their dependants and were not required to pay any duty or to obtain permission even at the larger stations. In 1848 the Resident at Lahore issued general orders requiring the sale by auction of the excise contracts, and for some years after the annexation of the Province, the Farming system was in force throughout it. In 1862, 1863, and 1864 the Central Distillery system was introduced in every district, and has, with the slight exceptions noticed in the next sentence, been continued ever since, the rates of duty being raised from time to time, till now the rates are higher than in any other province—so high that there exists in the Punjab a very considerable amount of illicit distillation, which now forms the main difficulty of excise administration in that province. The exceptions mentioned are a small portion of the Kangra district, in which a regulated outstill system has been in force since 1884, and one tahsil of the Gurgaon district, where the system described in paragraph 19 of Appendix G has this year been brought into force.

32. The following are the numbers of shops in the Punjab in each year since 1870:—

	Distilled Liquors of all kinds.	Drams.
1870-71	1,043	468
1871-72	1,048	500
1872-73	1,110	576
1873-74	1,061	728
1874-75	1,126	1,008
1875-76	1,143	1,002
1876-77	1,215	1,704
1877-78	1,249	1,850
1878-79	1,353	2,111
1879-80	1,349	2,350
1880-81	1,452	2,111
1881-82	1,501	2,059
1882-83	1,540	2,081
1883-84	1,535	2,167
1884-85	1,624	2,120
1885-86	1,680	2,005
1886-87	1,723	2,220
1887-88	1,947	3,500
1888-89	1,904	3,639

33. The increase in 1887-88 and the following year is apparent only, as previous to that year it had been the custom in many districts to include in the returns the number of licenses only, although some of them might include more than one shop. In that year instructions were issued to ensure that the returns showed correctly the number of separate shops. Nevertheless, on the whole, in this province the number of shops has increased. The explanation of this is that the central distillery system with very high rates of duties prevails throughout the Punjab: illicit distillation consequently prevails in that province to a very great extent, and is probably more rife than in any other Province in India. The increase in the number of shops has been allowed as one of the means employed in attempting to cope with the evil. In numerous passages in the Excise Reports of past years, the reason assigned for the establishment of new shops is that just mentioned. There is no doubt that the maintenance of the strict system and high rate of taxation in the Punjab necessitates the grant of licenses for a larger number of shops than would otherwise be required.

34. On the introduction of the central distillery system into the Punjab in 1862 the rates of still-head duty were fixed at—

R2 per gallon for spirit of the strength of London proof.
R1-8 " " " 25° under proof.

In 1863 these rates were raised to—

R2-8 per gallon for spirit of the strength of London proof.
R2 " " " 25° under proof.
R1-8 " " " 50° " "

In 1865 the rates were increased in the Rawal Pindi and Multan Divisions and the Hazara Districts to—

R3 per gallon for spirit of the strength of London proof.
R2-8 " " " 25° under proof.
R2 " " " 50° " "

In 1877 these higher rates were extended to the whole province with the exception of the Umballa and Hissar Divisions, which adjoin the North-West Provinces. There has been no change since. The levy of license fees for sale in addition to the still-head duty raises the total taxation of country liquor per gallon to a very high figure in the Punjab.

MADRAS.

35. In a minute by Sir Thomas Munro, dated 1807, in which he discussed the respective merits of the farming and the outstall systems, it is stated that arrack "has for ages been manufactured and sold in all places subject to no other restraint than that of taxation."

36. When the territories in Madras came under British administration the system found in force was the farming system, apparently quite unrestricted, the farmer having merely to pay his yearly rent and being left free to manufacture as he pleased and to establish shops in such numbers and in such places as he thought desirable.

37. The farming system was continued by the early British administrators. It is not clear how soon restrictions as to the number of shops, and in other respects, began to be

imposed, but in the early years of this century considerable discussion took place regarding excise regulations. In 1808 the question arose whether the Bengal system of licensing and taxing each still separately was not preferable to the farming system, and whether the direct management of the revenue would not be preferable to either of those systems, involving, as they did, the letting in farm of the revenues. The Board of Revenue and the Government of Madras considered that the objections based on general principles to farming the revenues did not apply "to the renting, as in the present case under restrictions an article of luxury by no means necessary, nay even detrimental, to the public weal." It was declared that the object held in view was "to restrain and regulate" the consumption of liquor, and the opinion was expressed that the health and good order of the people, which were objects of far more importance than the augmentation of revenue, would be more surely promoted by the farming than by the outstill system. The result of the discussions was the passing of Regulation No. I of 1808. It provided that the exclusive privilege of manufacturing and selling arrack should be farmed in each district, and that the places at which distillation and sale might take place should be determined by the Collector. The separate licensing of each still was also authorised as an alternative; and Collectors were recommended by executive instructions to try both plans in different parts of their districts. The second plan, the outstill system, was tried in a few districts but soon discontinued, and in 1815 the farming system, restricted and regulated according to the directions in the Regulation, was in force throughout the Presidency except in the town of Madras, where a special system of direct management was maintained.

38. Regulation I of 1820 amended the law by authorising the treatment of toddy and other fermented liquors in the same way as spirits by allowing Collectors to retain the manufacture and sale under direct management, where that was deemed preferable to farming, by providing penalties for breaches of the rules, and by giving more extensive powers to the Board of Revenue to frame rules for the regulation of sale and for all details of management and control.

39. This law remained in force for over forty years, and under it the farming system was universal with the exception of the town of Madras, regarding which a special Act was passed in 1852. In 1841 proposals to raise the rates of taxation were discussed but ultimately abandoned, district officers being merely enjoined to enforce strictly the prescribed minimum retail prices.

40. In 1864, Act III of that year was substituted as the Excise Law of Madras. The two main alterations were the grant of power to levy an excise duty on the quantity of liquor manufactured instead of an annual payment for the farm, and the reservation of the right to suppress the home manufacture of fermented toddy where that privilege was likely to be used as a cloak for illicit sales or distillation.

41. In 1869 the power conferred by the Act of 1864 was brought into operation in one district, and the monopoly of Ganjam was given to a contractor with the condition that he should pay a fixed duty on every gallon issued. This system was continued in Ganjam and extended to four other districts three years later. In the later contracts for these five districts the condition known as that of a "minimum guarantee" appears, at first assuming the form that if the duty realised did not reach a certain sum the Government should have a right to cancel the contract, and subsequently in the form in which it was afterwards adopted in Bombay, namely, that the monopolist undertook to pay a certain minimum sum as duty, even though the issues were of a quantity on which a smaller duty was payable.

42. In 1874, an officer was placed on duty to prepare a complete report regarding excise matters and to make recommendations for the improvement of the existing system. In 1875 the system just described was further extended to about half the districts of the province (the spirit monopoly being at the same time separated from that for fermented toddy), and it was further extended up to 1884. In this period it was found that illicit distillation prevailed, and that, owing to the absence of competition and the concentration of the business in the hands of a few rich firms and to the contractors being entrusted with all the preventive arrangements, the system was not a great success, and was open to improvement in several important respects. A Committee was appointed to report on Excise in 1884, and the subsequent excise measures in Madras have been based on the recommendations of that Committee.

43. From 1st October 1884 the system last described gave place in every district in which it was in force except one to that described in paragraph 11 of Appendix G, under which the monopoly of manufacture was let separately from that of sale, the former being granted on condition of payment of a fixed duty per gallon and that liquor should be supplied to the shops at a fixed maximum rate, and the right of sale being given on payment of a fixed fee per shop, or number of shops, or on payment of a fee determined by auction. After a

short trial this gave way to the system described in paragraph 8 of Appendix G under which no monopoly of manufacture is established. The law was amended by the enactment of Act 1 of 1886. Under the powers taken by it a Commissioner of Abkari was appointed, and reforms have ever since been vigorously pushed, the general tendency being to extend the system last mentioned.

44. The following table shows the number of shops in Madras in each year from 1876:—

	Distilled Liquor of all kinds.	Teddy.	Drugs.
1876-76	20,968	10,761	...
1876-77	17,205	20,683	...
1877-78	13,923	19,645	...
1878-79	16,755	18,844	...
1879-80	16,293	16,326	...
1880-81	15,321	16,854	1,238
1881-82	16,559	18,540	1,026
1882-83	18,072	18,231	1,098
1883-84	17,870	18,727	1,117
1884-85	19,970	19,569	1,107
1885-86	22,201	14,814	1,075
1886-87	27,566	15,933	1,175
1887-88	21,021	22,549	1,171

45. The rates of duty in Madras also, as in Bengal and Bombay, vary in different districts. Moreover, in that Presidency the change of system which took place in 1884 renders deceptive a comparison of the fixed rates after that date with those before it; because before 1884 no separate licensee's fees were levied in addition to the still-head duty. The comparison in that province must, therefore, be of the total incidence per gallon of the fixed duty and license fees combined. The information is given in the enclosures of the Madras letter appended. It will be seen that the incidence has considerably increased.

North-Western Provinces and Oudh.

46. The early history of excise in the North-Western Provinces is the same as that in Bengal, the two Provinces being under the same Administration till after 1832. The farming system, which was found in operation when the territories came under British rule, was continued, restrictions in the number of shops, and in regard to other matters, being introduced and made more stringent from time to time. Between 1813 and 1824 the Central Distillery system was tried and considered to be unsuitable. The "Directions to Revenue Officers," issued in 1838 after the separation of the Province from Bengal, mentioned the Central Distillery system as an alternative to the farming system: Act XXI of 1856 also authorised the establishment of that system; but it was not introduced anywhere. And in 1859 the Local Government, in reply to the reference from the Government of India, opposed the re-introduction of the Central Distillery system on the grounds that it had failed when tried before, and that the existing systems secured as high a duty as could be obtained without forcing consumers to illicit practices or unduly encouraging consumption. The systems then in force in the North-Western Provinces were the licensing of single stills, and also of shops on payment of fees fixed by the Collector; and the farming of manufacture and sale usually for one year for sub-divisions—the farm of a whole district was seldom resorted to—on payment of rents fixed by public tender: Collectors had discretion to resort to auction instead of tenders, but this discretion was seldom used. In the neighbouring Province of Oudh, however, after the confusion which followed the annexation of the Province and the Mutiny had passed away, the Central Distillery system was uniformly adopted from May 1861 in the form in which it still prevails in Northern India: the still-head duty was fixed at R1 for spirit of higher strength than 25° under proof and 12 annas on lower strengths: sales were at first allowed on licenses without fees, but fees were subsequently levied.

47. The views of the North-Western Provinces Government altered in regard to the Central Distillery system, and that system was introduced in nearly the whole of the North-Western Provinces from May 1858. The rates of duty were fixed at 12 annas a gallon for spirit of lower strength than 25° under proof and one rupee for spirits of higher strength: the subsequent changes in the rates of duty will be shown below.

48. The licenses for retail sale were at first sold by auction, and the receipts from this source formed a large part of the Excise Revenue. In 1867-68 an experiment was tried in one district with the object of allowing the number of shops to be fixed by the ordinary op-

ration of competition instead of the district authorities: in this experiment the still-head duty was relied on as the main part of the tax on liquor: licenses were granted to open shops on payment of a low fixed license fee at any place for which application was made, except that for police purposes two shops were not allowed within 200 yards of each other. The result was that while the number of shops actually opened was somewhat less than the number fixed as the limit in the previous year by the authorities, the receipts from still-head duty rose from Rs20,000 to Rs50,000. The inference was that there had been a large sale of illicit spirit on which no duty had been paid under the previous system, and that the effect of unrestricted competition among the shop-keepers when the artificial limitations in their number were removed, was to cause them to sell licit instead of illicit spirit, although as a fact the number of shops was not increased. The next year the Excise Commissioner proposed that this plan should be tried everywhere, and that licenses for shops should be granted at a low fixed fee uniform throughout the Province to all respectable applicants. It was anticipated that the number of shops would increase at first, but that the effect of competition would soon be to reduce the number to that really required for the convenience of the public.

49. These proposals were approved by the Government, but with a modification which deprived them of any value they might have by excluding the factor—free competition—which it was hoped would regulate the number of shops in a more effectual and beneficial manner than the local estimate of the requirements by the Collector was capable of effecting. The modification was the restriction of the number of shops to what it was in the previous year. In the next year 1870-71 a change was made, and the following rule laid down:—

“The Collector will fix the number and locality of the different shops, and determine their letting value according to the advantages possessed by each. It is not intended that they should, as a rule, be put up to public competition; but competition may be resorted to by the Collector and taken into account in determining the sum at which each shall be leased. To work this system effectively careful inquiries will be necessary into the amount of liquor sold, the distribution of the drinking population, the price at which liquor is obtainable, and many other points affecting the profitability of the several localities.”

50. This rule remained in force for many years, but the difficulties in the way of obtaining accurate information of the kind required to work the rule effectively have led to the reversion generally to the practice of putting up the shops to auction.

51. The experience of the working of the Central Distillery system from 1863 to 1870 proved that it had been much too extensively introduced, and that it had been applied in many tracts in which, under the circumstances which existed, its success was almost hopeless. Illicit practices were believed to be largely prevalent in those tracts, and this conclusion was proved to be correct by the comparison of the figures of revenue of the years before and after the farming system was re-introduced in certain districts: large increases in apparent consumption occurred in those places which it was impossible to explain by a sudden and startling change in the habits of the people, and which were explainable only by the existence of illicit practices in previous years.

52. In 1873 the Local Government expressed its conviction “that smuggling or the sale of illicit liquor was going on to a very large extent in several districts,” and that in some of them statistics “rendered it probable not only that the illicit sale of liquor existed, but that it was on the increase.”

53. In 1868 the only two tracts not brought under the Central Distillery system were the districts of the Jhansi Division which were surrounded by Native States and the mountainous district of Kumaon.

54. After 1871 the Farming or Outstill system was re-introduced successively, for the reasons above indicated, into portions of several other districts, the names of most of which will be found in extract (6) in Appendix C.

55. In 1877 a Committee was appointed to report on excise matters, and in accordance with its recommendations numerous measures were adopted for the improvement of the administration. A selected assistant was placed in charge of excise in each district, and to reduce the temptation to smuggling and the prevalence of malpractices in issuing spirit at the distilleries, the rate of duty was fixed at a uniform rate of one rupee irrespective of strength. The “Modified Distillery System,” described in paragraphs 14 and 15 of Appendix C above, was also proposed, and in the following years was tried in some districts; it was, however, found to be a failure and has been abandoned in all but an insignificant area.

56. The number of shops in the North-Western Provinces and Oudh in each year since 1876-77 are given in the following table: figures for early years are not available for Oudh:—

	Distilled Liquor of all kinds.	Tax.	Drugs.
1876-77	7,136	1,476	2,913
1877-78	7,388	1,531	3,533
1878-79	7,730	2,202	3,766
1879-80	8,398	2,623	3,752
1880-81	8,799	3,842	5,276
1881-82	9,019	4,043	5,324
1882-83	9,354	4,084	5,877
1883-84	9,895	4,239	6,000
1884-85	9,627	4,491	5,842
1885-86	8,349	4,102	4,667
1886-87	8,212	4,300	4,943
1887-88	8,119	4,135	4,962

The number of liquor shops is now higher than it was in 1876-77. The number increased from year to year up to 1883 when it amounted to 9,635: since that year there has been a steady reduction. As in the case of the Punjab, the increase in the earlier years had for its object the diminution of illicit practices. In reviewing the Excise Report for 1876-77, the Lieutenant-Governor expressed the opinion that the number of shops in distillery tracts was quite sufficient, and after noticing the variations in different districts said: "it is impossible to conceive that the taste of the people is as capricious as the allocation of shops by Collectors." In the Excise Commissioner's Report for 1882-83 it was said: "Shops should be so distributed that a man determined to drink may do so without an amount of inconvenience which might stimulate smuggling or illicit distillation, but at the same time, it is not desirable that a Government Department should act the pushing publican and establish shops in every prominent locality." In the same report it was observed that "in most districts we have to combat suspected malpractices rather than a tendency towards an excessive consumption of licit liquor." Thus it will be seen that the increase in the number of shops was made designedly with the object of diminishing the illicit practices which always are more difficult to check under the Central Distillery system than under any other. But the reduction in the rate of duty diminished the temptation to these evils, and this, added to the greater attention paid to the Excise administration by district officers since 1877, has rendered it possible to reduce the number of shops considerably since 1883.

57. The rates of duty have varied as under in the North-Western Provinces and Oudh:

58. In Oudh the rates fixed in 1861 were—

R s.	
1 0	for strengths higher than 25° U. P.
0 12	" lower " 25° "

In 1862 the latter rates were raised to R2 and R1-8. But in 1863 they were reduced to those of 1861.

In 1876 the Chief Commissioner of Oudh, in reply to a suggestion from the Government of India, expressed his readiness to raise the rate of duty to that in force in the North-Western Provinces, R1-8 a gallon. But as the North-Western Provinces Government in the meantime proposed to reduce the rate for the reasons stated below, and it was desirable to have the same rate in both Provinces, the Oudh rate was altered in 1877 to a uniform rate of one rupee a gallon irrespective of strength at the same time as that rate was adopted in the North-Western Provinces.

59. In the North-Western Provinces the rates fixed in May 1873 were—

R s.	
1 0	for strengths higher than 25° U. P.
0 8	" lower " 25° "

In October of the same year these rates were raised to R2 and R1.

In 1864 it was thought necessary to fix different rates for spirit distilled from mohwa and from molasses. For the former spirit R1 and 8 annas were fixed; and for the latter R1-8 and 12 annas. In 1866 these rates were raised to R1-8 and 12 annas and R2 and R1 respectively. In 1867 the malpractices connected with the testing of strength led to the abolition of the differential rates for different strengths, and the duty was fixed at a uniform rate of 8 annas for mohwa spirit and one rupee for molasses spirit. In 1869 the rate for both kinds of spirits was raised to R1-4 and in 1870 to R1-8. In 1876, the Local Government, in reply to a suggestion from the Government of India that the duty might be raised, said:—

“There is a strong consensus of opinion that the present rate, so far from being capable of increase, is too high and should be lowered. The still-head duty *plus* license fees falls on undiluted liquor at about R2-8 the gallon; and from the review of the Excise Report for 1873-74 His Excellency in Council will learn that in many districts the competition of illicitly manufactured liquor is on the increase. The loss of revenue is doubtless not wholly due to illicit distillation encouraged by a high rate of duty, for it is probable that much liquor leaves the distillery which pays no duty, and that the revenues are thereby defrauded; but in the eastern part of these Provinces especially, the facilities for the manufacture of native liquor from the mohwa tree are so great that the imposition of any but a light duty must certainly lead to illicit distillation. The best way of raising the excise revenue is still under His Honour's consideration. But in a country in which the means of distillation, whether from molasses or from mohwa, are so handy, and in many parts of which the competition from foreign territory is lively, it is impossible to raise the duty.”

In accordance with these views the Government of the North-Western Provinces in 1877 proposed that the rate should be reduced to R1 per gallon on the grounds that “this would greatly diminish the inducement to illicit manufacture:” and that “complaints have been numerous that the present rate of duty in the North-Western Provinces is so high as to have put duty-paid spirits beyond the means of the majority of the drinking classes, and given rise to much smuggling and illicit manufacture.”

The Government of India reluctantly sanctioned this measure. It has undoubtedly had a considerable effect in reducing illicit practices in the North-Western Provinces, complaints of which are now less common than formerly. The Government of India has, however, for some time been disposed to think that the rate is too low, and that illicit distillation and smuggling might now, with the more efficient administration which has been secured in consequence of the greater attention paid to excise matters in recent years, be kept in check even if the rate were raised. This view was not for some time pressed on the Local Government because of the known danger in interfering with the discretion of Local Governments in these matters. The Lieutenant-Governor has however recently been requested to consider whether the rate of duty should not now be raised.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 1st March 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
<i>Western Districts.</i>			
1	Burdwan March 1, '90	Nil	Weather—seasonable. Sugarcane being cut. Outturn about 18 annas. Prospects of other rabi crops continue favourable. Prices of common rice:— Burdwan 16½ Culna 16 Cutwa 16½ Ranigunge 19 } per rupee.
2	Bankura .. 1, '90	Nil	Weather—days hot, mornings and evenings cool. Wheat, barley, gram, and mustard being reaped. Pressing of sugarcane continues. Common rice 19 annas per rupee at Sudder and 18½ annas at Mishenpore.
3	Birbhum .. 1, '90	Nil	Weather—warm. Prospects of crops very fair. Price of common rice ranges from 17 to 20 annas per rupee.
4	Midnapur .. 1, '90	Nil	Weather—fine but getting hot. General prospects good. Indigo doing well some rain wanted in the Ghatal subdivision. Prices almost stationary. Prices of common rice:— Sudder 16 Contai 24 Tamluk 18 Ghatal 19 } per rupee.
5	Hugli .. 1, '90	Nil	Weather—seasonable. All crops doing well. Prices of common rice:— Sudder 12½ Serampore 14 Jehanabad 17½ } per rupee.
	Hooghly .. 1, '90	Nil	Weather—foggy mornings, days warm. State and prospects of crops good.
<i>Central Districts.</i>			
6	24-Parganas March 1, '90	Nil	Weather seasonable. A good winter crop has been harvested, and rabi crops promise well. New paddy doing well. Pressing of sugarcane proceeding. Common rice selling at from 16 to 18 annas per rupee.
7	Mudna .. 1, '90	Nil	Weather—seasonable. Prospects of crops on the ground favourable. Linseed, water, and gram being reaped and threshed; outturn may be 12 annas. Cultivation of land for rice going on.
8	Khoolna .. 1, '90	Nil	Weather—mornings foggy and days warm. Condition of new paddy and rabi crops good.
9	Jessore .. 1, '90	Nil	Weather—hot in the day, but cold in the night. Rain wanted for cultivation of rice lands. Harvesting of cold weather crops going on. Price of rice stationary.
10	Meerabad .. 1, '90	Nil	Weather—bright and cool. Harvesting of rabi crops continues. Land being prepared for bhadoi.
11	Meerapur .. 1, '90	Nil	Weather—days hot and nights cool. Prospects favourable. Average outturn of mustard 12 annas. Pressing of sugarcane continues.
12	Rajshahi .. 1, '90	Nil	Weather—hot in day, cool at night. Harvesting of mustard almost over. Prospects of other rabi crops generally good, but want of rain much felt. Land being prepared for rice and jute at Nattore. Ganja manufacture continues. Rice sells at 17½ annas per rupee.
13	Rangpur .. 1, '90	Nil	Weather—cool with high northerly winds. Rain much wanted for rice sowings. Rabi crops doing well. Sugarcane and tobacco both most promising.
14	Hogra .. 1, '90	Nil	Weather—seasonable. Land is being ploughed for new paddy, jute, &c. State of the standing crops (peas, linseed, &c.) good. Outturn of sugarcane 16 annas. About one-eighth of the land appears to have been transplanted with sugarcane. Common rice selling at 22 annas per rupee.
15	Pabna .. 1, '90	Nil	Weather—cloudy and fair. Outturn of mustard and tobacco expected to be 12 annas. Other winter crops doing well. Rain wanted for chowra and kharif.
16	Darjeeling .. 1, '90	Nil	Weather—fair. Crops doing well and prospects generally good. Prices of common rice:— Darjeeling 13 Kumrang 18 Miliguri 19 } per rupee.
17	Patigora .. 1, '90	Nil	Weather—hot days with cold nights. General condition of tobacco crop good. Prices stationary.

No.	District and date of return.	Rainfall at Sudder station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.—concluded.			
Eastern Districts.			
DAKKA DIV.	18 Dacca March 1, '90	Nil	Weather—days getting hot, but nights are cool and fine. Winter crops doing well. Mustard, pulses, and sugarcane being cut. Ploughing for early rice and jute is well advanced. Fodder is available. No special change in the prices of food-grains. Common rice 15 seers per rupee.
	19 Furre-dpur .. 1, '90	Nil	Weather—cooler at nights than in the previous week. State and prospects of crops continue fair. Sugarcane being planted. Cheap rice selling at 16 seers per rupee.
	20 Backergunge .. 1, '90	Nil	Weather—seasonable. Prospects of <i>rabbi</i> crops fair. Common rice selling at 18½ seers per rupee.
	21 Nymensingh .. 1, '90	Nil	Weather—seasonable. Prospects of crops good. Coarse rice sells at 14 seers per rupee.
	22 Chittagong .. 1, '90	Nil	Weather—seasonable, getting warmer. Rain wanted for crops.
CHITTAGONG DIV.	23 Noakholly .. 1, '90	Nil	Weather—variable, hot in day, but cool in night. <i>Rabbi</i> crops are being harvested. Cultivation of soil for <i>aus</i> continues. Rain wanted. Price of rice stationary.
	24 Tipperah .. 1, '90	Nil	Weather—unusually warm. Strong winds; cloudy. Gathering of mustard completed. <i>Boro</i> paddy and chillies thriving, but rain wanted. Prospects good in land, on <i>chars</i> fair.
	25 Chittagong Hill Tracts. Feb. 28, '90	Nil	Weather—cold in the morning, days becoming hot. Gathering of mustard now over; outturn estimated at about 6 annas. Tobacco and chillies progressing, but rain much wanted. <i>Jum</i> cutting commenced. Sugarcane being planted. Inferior and lowest class rice selling at 16 seers per rupee.
	Nil Tipperah March 1, '90	Nil	Weather—getting warm. Sugarcane still being cut. <i>Boro</i> paddy doing well in the low lands. <i>Jums</i> are still being cleared.
	26 Patna .. 1, '90	0.03	Weather—nights cool, days warm. Harvesting of <i>rabbi</i> crops being pushed on. Wheat and barley not yet commenced to be reaped. Collection of opium going on. Prospects continue favourable. Prices of food-grains almost stationary.
BHAHAR DIV.	27 Gaya .. 1, '90	Nil	Weather—seasonable. Opium being extracted. Mustard, linseed, gram, and <i>kharra</i> being reaped.
	28 Shahabad .. 1, '90	0.04	Weather—warm and cloudy. Harvesting of pulses almost finished with average outturn. Wheat promising. Opium being extracted. Prospects excellent. There was a storm on the night of the 25th, with very slight rain, which damaged mango blossoms, but did no appreciable harm to the poppy-crop.
	29 Darbhanga .. 1, '90	Nil	Weather—days warm, but nights cool; a storm of wind followed by a few drops of rain on the night of the 25th. Wheat, barley, and linseed are ripening. Extraction of opium commenced. Indigo is being sown. Lands in <i>churs</i> being ploughed for paddy. Common rice selling at 19½ seers per rupee at Sudder.
	30 Muzafferpur .. 1, '90	Nil	Weather—warm; a gale with slight rain on 25th all over district. Prospects favourable. Poppy in full flower, and collection of drug commenced.
	31 Saran .. 1, '90	Nil	Weather—clear, occasionally cloudy. <i>Rabbi</i> , including oats, gram, and linseed, doing well, and gives prospect of a 16-anna crop. Poppy prospects also continue favourable.
BHOJPOUR DIV.	32 Champaran .. 1, '90	Nil	Weather—getting hot, occasionally cloudy. <i>Rabbi</i> attaining maturity with the prospect of a 16-anna crop. Linseed ripening. Planting of sugarcane progressing. Opium in juice, and mango trees in flowers. Indigo sowings continued.
	33 Monghyr Begusserai .. 1, '90	0.10 0.8	Weather—seasonable. Days warm, but nights cool. Standing crops doing well. Late wheat and peas in the Begusserai subdivision have slightly suffered from rain, but indigo has benefited. Prices stationary.
	34 Bhagalpur .. 1, '90	Nil	Weather—seasonable. Linseed being harvested with about 8 annas outturn. Low lands being ploughed.
	35 Patna .. 1, '90	Nil	Weather—days rather warm with strong west wind. Tobacco being gathered. All <i>rabbi</i> crops doing well. Wheat would be the better for a shower. Ploughing going on.
	36 Maidah .. 1, '90	0.06	Weather—fine and warm with westerly wind. A slight shower on one day in the Sudder. <i>Rabbi</i> crops ripening and doing fairly. Transplanting of <i>boro</i> paddy continues. Common rice selling at an average of 18 seers per rupee.
BHOJPOUR DIV.	37 Sathal Pergia .. 1, '90	Nil	Weather—hot with strong wind in the north; cool and cloudy in the south-west. Mango crop promises well. Sugarcane being planted. <i>Rabbi</i> crop generally promises well, except in Pakour, where mustard, linseed, and wheat expected to yield 8 annas only.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
ORISSA DIV.	38 Cuttack March 1, '90	Nil	Weather—sky misty in the morning. Harvesting of <i>mung</i> completed. Prospects continue good.
	39 Pooner Feb. 28, '90	Nil	Weather—seasonable. Threshing of the winter crop (late <i>saradi</i>) still continues. <i>Dalua</i> and <i>mung</i> doing well. Mango crop almost lost by fog. Price of rice stationary.
	40 Balasore March 1, '90	0.20	Weather—seasonable. Few crops on the ground. Such as there are doing fairly well. Rain would be welcome.
CHOTA NAAGPORE.			
South-West Frontier Agency.			
	41 Hazaribagh March 1, '90	Nil	Weather—seasonable. Crops in good condition generally, but some rain is needed.
CHOTA NAAGPORE DIV.	42 Sahardugga .. 1, '90	Nil	Weather—days hot, mornings cool. Prospects of <i>rubbi</i> crops favourable. In Palamow the <i>rubbi</i> crops that were spared from the late hoar-frost are now ready. <i>Mohua</i> crop promises well. Uncommon abundance of mango blossom all over the district.
	43 Singhbhum .. 1, '90	Nil	Weather—seasonable. Prospects of crops remain good. Prices stationary.
	44 Manbhum .. 1, '90	Nil	Weather—rapidly getting hotter, and westerly winds beginning. Spring crops doing well. Sugarcane being planted.

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 14th March 1890.P. NOLAN,
Secy. to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from
23rd February to 1st March 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
Feb.	23rd	142.8	9.1	29.015	75.6	87.7	24.4	63.3	66.5	0.602	64.2	71	WSW and variable	63	Nil	Clear, Δ .
"	24th	141.2	9.6	.921	76.6	87.9	21.8	66.1	69.5	.627	65.4	71	WSW and SW by W	81	"	Morning cloudy, day and night clear, Δ .
"	25th	141.3	8.4	.914	76.1	87.4	22.4	65.0	66.8	.608	64.5	70	SW by W and NNW	83	"	Partially cloudy \equiv , Δ .
"	26th	142.5	9.3	.861	76.0	90.8	28.0	62.8	69.0	.616	64.9	69	WSW, SW and SSW	149	"	Chiefly clear.
"	27th	140.0	8.3	.885	78.1	87.5	20.6	66.9	70.3	.644	66.2	68	SSW and variable	83	"	Partially cloudy Δ .
"	28th	140.3	8.2	.917	76.4	86.7	21.1	65.6	64.9	.468	57.1	65	WNW and variable	67	"	Chiefly clear Δ .
March	1st	142.2	7.3	.903	75.9	86.8	24.0	62.8	70.2	.667	67.2	76	S by E, SSW and variable.	67	"	Chiefly cloudy Δ , \equiv , Δ , Δ .

The mean pressure of the seven days ... 29.902
 The average pressure of the corresponding period for 24 years, S.-G.'s Office ... 29.900

The total number of hours of bright sunshine ... 60.2
 The maximum possible number of hours of sunshine ... 81.1

The mean temperature of the seven days ... 76.4
 The average temperature of the corresponding period for 24 years, S.-G.'s Office ... 76.5
 The extreme variation of temperature ... 25.0
 The maximum temperature ... 90.8

The highest velocity of the wind in one hour ... 17

The highest pressure of wind on one square foot ... Not measurable.

The mean relative humidity ... 69

The average relative humidity of the corresponding period for 24 years, S.-G.'s Office ... 64

The total fall of rain from 23rd February to 1st March 1890 ... Nil

The average fall of the corresponding period for 24 years, S.-G.'s Office ... 0.20

The total fall from 1st January to 1st March 1890 ... 0.77

The average fall of the corresponding period for 24 years, S.-G.'s Office ... 1.49

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

Δ overcast, Δ dew, \equiv fog, Δ thunder, Δ lightning.

N.B.—In the weekly report from 9th to 15th February 1890, read 59.9 for 55.9 as the mean wet bulb of the 9th February 1890.

G. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;
 Calcutta, the 3rd March 1890.

Meteorological Report of the Province of Bengal

		STATION OBSERVATIONS.													
		AIR PRESSURE.			WIND.		TEMPERATURE.								
DISTRICT.	Representative station.	Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Inf.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.	
CENTRAL.	Pooree	29.974	29.966	—0.007	NW	22.8	90.3	23rd Feb.	89.4	21st Feb.	90.0	71.9	79.3	+7.4	
	Cuttack	29.901	29.884	—0.016	NW	31.9	85.3	23rd Feb.	83.3	24th Feb.	84.0	67.9	77.1	+9.2	
	Balesore	29.901	29.879	—0.021	N	12.7	85.4	27th Feb.	80.0	23rd Feb.	91.5	63.1	76.3	+3.0	
SOUTH-WEST BENGAL.	South-West Midnapore	29.963	29.960	—0.003	Westerly	24.7	88.2	28th Feb.	81.9	23rd Feb.	85.3	71.3	78.4	+7.1	
	Midnapore	29.829	29.804	—0.025	N	10.4	86.3	27th Feb.	83.2	23rd Feb.	93.7	64.6	79.3	+9.9	
	24-Pergunnah	Calcutta	29.950	29.972	—0.021	Calm & Westerly	8.2	91.0	27th Feb.	83.8	25th Feb.	89.4	64.7	74.0	+2.1
EAST BENGAL.	Bardwan	29.854	29.868	—0.014	Calm	34.8	85.8	27th Feb.	80.0	24th Feb.	91.6	62.7	77.1	+2.6	
	Hankoo	29.841	29.854	—0.013	W	6.7	84.1	27th Feb.	80.9	23rd Feb.	91.6	62.7	77.1	+2.8	
	Barbours	29.844	29.860	—0.016	WNW	55.2	84.3	27th Feb.	80.1	23rd Feb.	91.1	62.5	76.8	+2.7	
NORTH BENGAL.	Meorshahad	29.889	29.880	—0.009	Westerly	75.8	82.2	27th Feb.	57.7	24th Feb.	88.0	61.1	74.5	+1.9	
	Nuddea	29.924	29.907	—0.017	WSW	63.4	81.7	27th Feb.	51.8	23rd Feb.	89.0	57.9	74.1	+1.9	
	Jessore	29.854	29.868	—0.014	South-westerly	48.4	81.8	27th Feb.	80.3	23, 24, 25 Feb.	89.0	62.5	77.3	+3.0	
SOUTH BENGAL.	Chittagong	29.886	29.880	—0.006	Variable	88.9	84.8	25th Feb.	80.6	23th Feb.	85.7	63.3	75.5	+3.1	
	Chittagong Hill Tracts	Demagiri	Observations not received.												
	Backergunge	Barisal	29.902	29.889	—0.013	Calm	47.4	85.3	28th Feb.	80.1	24th Feb.	87.2	60.5	74.8	+3.0
CENTRAL BENGAL.	Noakhally	29.955	29.900	—0.055	South-westerly	91.2	83.0	28th Feb.	81.3	24th Feb.	88.1	65.8	75.9	—	
	Furteedpore	29.923	29.904	—0.019	NW	68.7	86.0	23rd Feb.	81.3	23th Feb.	85.2	62.3	74.7	+2.1	
	Dacca	29.931	29.951	—0.020	S & SSW	70.8	80.8	27th Feb.	81.3	24th Feb.	88.5	63.6	76.0	+2.0	
NORTH BENGAL.	Comilla	29.938	29.97	—0.032	N	4.2	85.1	24th Feb.	80.8	24th Feb.	84.7	64.3	75.5	+2.2	
	Mymensingh	29.940	29.960	—0.020	Easterly	70.7	85.1	27th Feb.	87.0	24th Feb.	86.0	65.5	75.3	+2.8	
	Boara	29.985	29.951	—0.034	S	87.1	91.1	27th Feb.	80.1	24th Feb.	88.3	66.9	75.6	+3.0	
SOUTH BENGAL.	Pahna	29.904	29.942	—0.038	WSW	45.0	80.5	27th Feb.	84.1	24th Feb.	85.3	65.5	74.3	+3.0	
	Majshahy	29.881	29.953	—0.072	South-westerly	80.0	89.3	27th Feb.	80.2	24th Feb.	87.0	60.6	73.8	+6.0	
	Waldah	29.876	29.861	—0.015	W	80.8	92.3	27th Feb.	83.3	23rd Feb.	89.0	60.5	72.6	—	
CENTRAL BENGAL.	Dinapore	29.812	29.808	—0.004	SW	107.6	80.1	27th Feb.	81.2	24th Feb.	87.2	59.0	71.9	+3.9	
	Bongpore	29.825	29.801	—0.024	N	41.7	80.0	27th Feb.	80.7	24th Feb.	85.0	59.7	71.2	+1.5	
	Julpore	29.840	29.842	—0.002	NW & E	115.0	85.6	27th Feb.	80.7	24th Feb.	85.0	60.1	72.5	+3.4	
SOUTH BENGAL.	Darjeeling Hill Tracts	Darjeeling	29.935	29.940	—0.005	SW	80.2	80.0	27th Feb.	87.8	24th Feb.	84.0	59.0	74.8	+3.7
	Purneah	29.811	29.840	—0.029	South-westerly	128.1	87.7	27th Feb.	80.0	24th Feb.	83.0	64.9	70.2	+1.9	
	Moulampur	29.776	29.951	—0.175	W-W	141.0	87.9	28th Feb.	80.0	24th Feb.	85.1	60.0	74.0	—	
CENTRAL BENGAL.	Darbhanga	29.776	29.951	—0.175	W-W	141.0	87.9	28th Feb.	80.0	24th Feb.	85.1	60.0	74.0	—	
	Chumpra	29.771	29.951	—0.180	Variable	121.8	88.2	24th Feb.	80.0	24th Feb.	84.3	59.8	73.0	+3.0	
	Bara	29.845	29.849	—0.004	SW	235.1	81.3	22nd Feb.	80.5	23rd Feb.	80.0	62.9	76.0	+3.1	
SOUTH BENGAL.	Shahabad	29.728	29.976	—0.248	W	107.4	84.9	24th Feb.	85.4	23rd Feb.	80.0	60.3	72.0	+3.7	
	Gya	29.737	29.982	—0.245	South-westerly	140.6	80.5	26th Feb.	83.7	23rd Feb.	88.1	67.3	72.8	+3.9	
	Patna	29.867	29.981	—0.114	W	101.0	81.4	27th Feb.	80.1	24th Feb.	87.0	63.0	75.0	+3.7	
CENTRAL BENGAL.	South Bhagalpur	29.776	29.944	—0.168	Calm & Westerly	30.1	81.2	27th Feb.	84.5	24th Feb.	85.0	65.6	72.8	+3.9	
	North Bhagalpur	29.427	29.975	—0.548	Calm & NW	67.2	82.0	27th Feb.	86.6	23rd Feb.	89.0	60.0	74.0	—	
	Hasaribagh	29.810	29.901	—0.091	South-westerly	144.3	87.2	27th Feb.	85.4	24th Feb.	84.7	60.4	72.1	+1.7	
SOUTH BENGAL.	Manbhum	29.810	29.901	—0.091	Calm	144.3	87.2	27th Feb.	85.4	24th Feb.	84.7	60.4	72.1	+1.7	
	Singbhum	29.810	29.901	—0.091	South-westerly	144.3	87.2	27th Feb.	85.4	24th Feb.	84.7	60.4	72.1	+1.7	
	Chhota Nagpur	29.810	29.901	—0.091	South-westerly	144.3	87.2	27th Feb.	85.4	24th Feb.	84.7	60.4	72.1	+1.7	

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetic averages of the readings during the same period for the years 1871-80. The humidity of the atmosphere is expressed in percentage, saturated air being represented by 100. A clear sky is denoted by 0 and an overcast sky by 10. The mean of the numerical means or average of the rainfall in that district determined from the returns sent in by the subdivisional stations for the period in question during the year. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 28th of February 1890.

DISTRICT OBSERVATIONS.															Representative station.	DISTRICT.	METEOROLOGICAL DIVISION.
No. of Station.	Average cloud amount at 5 A.M. for week.	Rainfall of week at observing station.	OF WEEK.		RAINFALL.												
			Mean for district.	Normal mean.	Since 1st of month.			Since 18th May 1889.			Average number of rainy days.	Normal number of rainy days.					
					Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.							
11	0.5	NH	NH	0.14	NH	0.83	-0.63	74.94	86.46	+11.52	0.0	0.3	Poorce	Poorce	UNNAO.		
12	4.0	NH	NH	0.01	0.08	0.01	0.81	-0.80	68.40	68.79	+13.39	0.2	0.3	Gopalpore		Outlack	
13	1.4	NH	0.01	0.08	0.01	0.81	-0.80	68.40	68.79	+13.39	0.2	0.3	False Point	Outlack			
14	0	0.16	0.08	0.34	4.06	1.06	-0.08	50.04	54.37	-4.33	0.3	0.4	Balasore	Balasore	SOUTH-WEST MIDNAPORE.		
15	3.0	0.11	0.07	0.23	0.07	1.38	-1.31	54.61	63.75	-9.14	0.7	0.4	Bauro Island	South 24 Perannahs			
16	0.4	NH	NH	0.19	NH	1.00	-1.00	40.39	52.57	-12.18	0.0	0.3	Midnapore	Midnapore			
17	1.3	NH	NH	0.15	NH	1.25	-1.25	54.10	52.91	+1.19	0.0	0.3	Calcutta	24 Perannahs...	SOUTH-WEST MIDNAPORE.		
18	1.1	NH	NH	0.14	NH	1.03	-1.03	43.89	47.74	-3.85	0.0	0.4	Burdwan	Howrah			
19	1.1	NH	NH	0.10	NH	0.78	-0.78	53.93	53.01	+0.92	0.0	0.3	Burdwan	Howrah			
20	1.4	NH	NH	0.07	NH	0.08	-0.08	52.46	52.80	-0.34	0.0	0.3	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
21	1.1	NH	NH	0.08	NH	0.70	-0.70	51.17	51.31	-0.14	0.0	0.3	Burdwan	Howrah			
22	1.6	NH	NH	0.12	NH	1.04	-1.04	51.01	50.16	+0.85	0.0	0.3	Burdwan	Howrah			
23	1.1	NH	NH	0.10	NH	1.11	-1.11	54.75	54.23	+0.52	0.0	0.3	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
24	2.3	NH	NH	0.13	NH	0.73	-0.73	100.35	114.61	-14.26	0.0	0.3	Burdwan	Howrah			
25	1.4	NH	NH	0.13	NH	0.80	-1.05	78.41	78.05	+0.36	0.0	0.4	Burdwan	Howrah			
26	0	NH	0.07	0.10	0.07	1.05	-0.98	90.80	108.16	-17.36	0.0	0.4	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
27	0.4	NH	NH	0.12	NH	1.20	-1.20	62.22	56.92	+5.30	0.0	0.4	Burdwan	Howrah			
28	1.3	NH	NH	0.10	NH	1.20	-1.20	76.10	60.80	+15.30	0.0	0.4	Burdwan	Howrah			
29	1.6	NH	NH	0.14	NH	1.02	-1.02	50.03	70.23	-20.20	0.0	0.4	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
30	0.6	NH	NH	0.09	NH	0.92	-0.92	54.75	68.25	-13.50	0.0	0.3	Burdwan	Howrah			
31	0	NH	NH	0.01	NH	0.78	-0.78	63.02	58.01	+5.01	0.0	0.1	Burdwan	Howrah			
32	0.7	NH	NH	0.07	NH	1.05	-1.05	53.37	54.40	-1.03	0.0	0.3	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
33	0.4	NH	NH	0.01	NH	0.70	-0.70	54.35	54.35	0.00	0.0	0.3	Burdwan	Howrah			
34	0	0.08	0.03	0.01	0.03	0.59	-0.59	39.79	54.81	-15.02	0.0	0.1	Burdwan	Howrah			
35	0.3	NH	NH	0.01	NH	0.48	-0.48	57.49	57.83	-0.34	0.0	0.1	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
36	0	NH	NH	0.02	NH	0.43	-0.43	58.87	74.36	-15.49	0.0	0.1	Burdwan	Howrah			
37	0	NH	NH	0.02	NH	0.29	-0.29	117.73	111.64	+6.09	0.0	0.1	Burdwan	Howrah			
38	0.0	NH	NH	0.13	NH	0.57	-0.57	153.46	153.04	+0.42	0.0	0.3	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
39	1.1	NH	NH	0.02	NH	0.50	-0.50	75.00	89.15	-14.15	0.0	0.1	Burdwan	Howrah			
40	0.0	0.02	0.03	0.03	0.03	0.39	-0.37	48.83	48.93	-0.10	0.0	0.1	Burdwan	Howrah			
41	1.9	NH	NH	0.01	NH	0.40	-0.40	52.11	45.12	+6.99	0.0	0.0	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
42	1.3	NH	NH	0.01	NH	0.28	-0.28	63.96	47.17	+16.79	0.0	0.1	Burdwan	Howrah			
43	0	NH	NH	0.05	NH	0.40	-0.40	40.13	45.43	-5.30	0.0	0.1	Burdwan	Howrah			
44	2.1	NH	0.02	0.03	0.03	0.40	-0.38	40.09	60.48	-20.39	0.0	0.1	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
45	2.1	0.01	0.02	0.03	0.03	0.40	-0.38	40.09	60.48	-20.39	0.0	0.1	Burdwan	Howrah			
46	2.1	0.04	0.02	0.03	0.03	0.40	-0.38	40.09	60.48	-20.39	0.0	0.1	Burdwan	Howrah			
47	2.0	NH	0.02	0.03	0.03	0.42	-0.40	37.00	42.04	-5.04	0.0	0.1	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
48	1.4	0.03	0.01	NH	0.01	0.41	-0.40	43.50	41.73	+1.77	0.0	0.0	Burdwan	Howrah			
49	1.0	0.02	0.04	0.03	0.04	0.33	-0.33	41.47	42.00	-0.53	0.0	0.1	Burdwan	Howrah			
50	0.4	NH	NH	0.03	NH	0.47	-0.47	54.15	51.25	+2.90	0.0	0.1	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
51	1.1	NH	NH	0.03	NH	0.50	-0.50	43.03	51.00	-7.97	0.0	0.1	Burdwan	Howrah			
52	1.4	NH	NH	0.03	NH	0.72	-0.72	44.34	44.85	-0.51	0.0	0.1	Burdwan	Howrah			
53	0.7	NH	NH	0.04	NH	0.44	-0.44	44.34	44.85	-0.51	0.0	0.1	Burdwan	Howrah	SOUTH-WEST MIDNAPORE.		
54	0.7	NH	NH	0.04	NH	0.44	-0.44	44.34	44.85	-0.51	0.0	0.1	Burdwan	Howrah			
55	0.7	NH	NH	0.04	NH	0.44	-0.44	44.34	44.85	-0.51	0.0	0.1	Burdwan	Howrah			

The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.
 The means of the district are the numerical average of the rainfall returns received in the district, &c., from total rainfall at the individual stations.

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 28th of February 1890.

Meteorological division.	District.	Station.	RAINFALL.							TOTAL		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 1st of May 1889.	Average rainfall from May 1st.
			Saturday, 22nd February.	Sunday, 23rd February.	Monday, 24th February.	Tuesday, 25th February.	Wednesday, 26th February.	Thursday, 27th February.	Friday, 28th February.	Number of rainy days.	of rainfall week.				
Ouzma	Pooree	Pooree	...	...	...	...	...	...	...	Nd	Nd	Nd	0.40	60.71	
		Khurda	...	...	...	...	...	...	...	Nd	Nd	Nd	0.48	70.57	
		Bangur	...	...	...	...	...	...	...	Nd	Nd	Nd	0.48	85.50	
		Palas Point	...	...	...	...	...	...	...	Nd	Nd	Nd	0.61	77.00	
		Gop	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		Pipli	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
	Cuttack	Jagatsinghpore	...	...	...	...	...	...	...	Nd	Nd	Nd	0.61	74.40	
		Banki	...	...	...	...	0.7	...	0.02	Nd	Nd	Nd	0.73	87.58	
		Cuttack	...	...	...	...	...	...	...	Nd	Nd	Nd	0.73	75.18	
		Kendrapara	...	...	...	...	...	...	...	Nd	Nd	Nd	0.73	72.36	
		Jajpore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.25	87.66	
South-West Bengal.	Balasore	Dharmata	...	...	...	...	...	...	...	Nd	Nd	Nd	?	50.25	
		Saltore	...	...	...	...	...	...	...	Nd	Nd	Nd	?	72.47	
		Chandwa	...	...	...	...	...	...	...	Nd	Nd	Nd	1.01	55.04	
		Blundia	...	...	...	...	0.30	...	...	Nd	Nd	Nd	1.01	57.05	
		Sorab	...	...	...	...	...	...	...	Nd	Nd	Nd	0.64	46.05	
	Midnapore	Balasore	...	...	...	...	...	...	0.15	Nd	Nd	Nd	1.02	50.74	
		Jalgaon	...	...	...	...	...	...	...	Nd	Nd	Nd	0.80	54.79	
		Haripodah	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		Contal	...	...	...	...	...	...	0.09	1	0.09	0.09	1.33	55.27	
		Sanger Island	...	...	...	...	...	...	0.11	1	0.11	0.11	1.33	50.85	
South-West Bengal.	Diamond Harbour	Tumlook	...	...	...	...	...	...	...	Nd	Nd	Nd	1.22	49.09	
		Midnapore	...	...	...	...	...	...	...	Nd	Nd	Nd	0.89	46.20	
		Ginttal	...	...	...	...	...	...	...	Nd	Nd	Nd	0.89	43.30	
		Kutrahaty	...	...	...	...	...	...	...	Nd	Nd	Nd	?	50.83	
		Garhat	...	...	...	...	...	...	...	Nd	Nd	Nd	?	40.29	
	Diamond Harbour	Diamond Harbour	...	...	...	...	...	...	...	Nd	Nd	Nd	1.08	63.79	
		Canning Town	...	...	...	...	...	...	...	Nd	Nd	Nd	?	57.45	
		Alipore Jail	...	...	...	...	...	...	...	Nd	Nd	Nd	1.47	51.47	
		Barrackpore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.27	52.2	
		Dum-Dum	...	...	...	...	...	...	...	Nd	Nd	Nd	1.13	65.45	
South-West Bengal.	Howrah	Harnet	...	...	...	...	...	...	...	Nd	Nd	Nd	1.29	58.71	
		Buachhat	...	...	...	...	...	...	...	Nd	Nd	Nd	1.04	63.61	
		Howrah	...	...	...	...	...	...	...	Nd	Nd	Nd	1.09	60.44	
		Moharaka	...	...	...	...	...	...	...	Nd	Nd	Nd	1.41	55.04	
		(Gulabaria)	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
	Hooghly	Serainpore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.24	55.03	
		Hooghly	...	...	...	...	...	...	...	Nd	Nd	Nd	1.24	57.53	
		Jehanabad	...	...	...	...	...	...	...	Nd	Nd	Nd	1.27	41.01	
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
South-West Bengal.	Burdwan	China	...	...	...	...	...	...	...	Nd	Nd	Nd	1.04	41.33	
		Burdwan	...	...	...	...	...	...	...	Nd	Nd	Nd	0.80	47.25	
		Chirwa	...	...	...	...	...	...	...	Nd	Nd	Nd	1.10	45.11	
		Kanungunge	...	...	...	...	...	...	...	Nd	Nd	Nd	1.19	63.90	
		Mantur	...	...	...	...	...	...	...	Nd	Nd	Nd	?	53.80	
	Bankura	Bankura	...	...	...	...	...	...	...	Nd	Nd	Nd	0.87	50.85	
		Bhatnagar	...	...	...	...	...	...	...	Nd	Nd	Nd	0.77	57.40	
		Mayura	...	...	...	...	...	...	...	Nd	Nd	Nd	0.64	63.91	
		Khatra	...	...	...	...	...	...	...	Nd	Nd	Nd	?	45.14	
		Jadga	...	...	...	...	...	...	...	Nd	Nd	Nd	?	48.40	
South-West Bengal.	Burdwan	Kotalpore	...	...	...	...	...	...	...	Nd	Nd	Nd	?	40.44	
		Anda	...	...	...	...	...	...	...	Nd	Nd	Nd	?	59.17	
		Gangajalhat	...	...	...	...	...	...	...	Nd	Nd	Nd	?	55.35	
		Katipore	...	...	...	...	...	...	...	Nd	Nd	Nd	?	51.44	
		Tanamukha	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
	Bardhaman	Bh. Soory	...	...	...	...	...	...	...	Nd	Nd	Nd	0.91	59.05	
		Bhatnagar	...	...	...	...	...	...	...	Nd	Nd	Nd	0.07	47.07	
		Bangore Hall	...	...	...	...	...	...	...	Nd	Nd	Nd	0.58	47.79	
		Katipore	...	...	...	...	...	...	...	Nd	Nd	Nd	?	65.04	
		Murali	...	...	...	...	...	...	...	Nd	Nd	Nd	?	63.10	
South-West Bengal.	Nudra	Kanaghat	...	...	...	...	...	...	...	Nd	Nd	Nd	0.93	50.10	
		Khatnagar	...	...	...	...	...	...	...	Nd	Nd	Nd	1.04	42.95	
		Chokananga	...	...	...	...	...	...	...	Nd	Nd	Nd	1.11	49.60	
		Moharpore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.03	53.15	
		Kochitoo	...	...	...	...	...	...	...	Nd	Nd	Nd	1.11	50.00	
	Kholna	Satkhira	...	...	...	...	...	...	...	Nd	Nd	Nd	0.93	51.54	
		Bagarhat	...	...	...	...	...	...	...	Nd	Nd	Nd	1.31	65.44	
		Khosima	...	...	...	...	...	...	...	Nd	Nd	Nd	1.11	50.53	
		Nakpur	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		Rampal	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
South-West Bengal.	Jessore	Narail	...	...	...	...	...	...	...	Nd	Nd	Nd	1.16	52.01	
		Jessore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.09	63.90	
		Jhetulah	...	...	...	...	...	...	...	Nd	Nd	Nd	1.10	50.74	
		Magorah	...	...	...	...	...	...	...	Nd	Nd	Nd	1.08	50.08	
		Wingong	...	...	...	...	...	...	...	Nd	Nd	Nd	1.0	47.64	
	Moorsheadabad	Kandi	...	...	...	...	...	...	...	Nd	Nd	Nd	0.89	55.80	
		Bachampore	...	...	...	...	...	...	...	Nd	Nd	Nd	1.40	40.25	
		Lathag	...	...	...	...	...	...	...	Nd	Nd	Nd	0.72	47.15	
		Asomungo	...	...	...	...	...	...	...	Nd	Nd	Nd	0.76	?	
		Juzupore	...	...	...	...	...	...	...	Nd	Nd	Nd	0.71	55.01	
South-West Bengal.	Chittagong	Jalga	...	...	...	...	...	...	...	Nd	Nd	Nd	0.65	59.02	
		Jayanga	...	...	...	...	...	...	...	Nd	Nd	Nd	?	43.20	
		Akharanj	...	...	...	...	...	...	...	Nd	Nd	Nd	?	49.06	
		Pathabari	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
	Chittagong Hill Tracts.	Cox's Bazar	...	...	...	...	...	...	...	Nd	Nd	Nd	0.49	135.50	
		Chittagong	...	...	...	...	...	...	...	Nd	Nd	Nd	0.40	77.09	
		Kutubdia	...	...	...	...	...	...	...	Nd	Nd	Nd	?	112.60	
		Kutubdia	...	...	...	...	...	...	...	Nd	Nd	Nd	?	63.06	
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
South-West Bengal.	Chittagong Hill Tracts.	Rangamati	...	...	...	...	...	...	...	0.98	1	0.98	1.10	61.20	
		Ruma	...	...	...	...	...	...	...	Nd	Nd	Nd	0.07	67.20	
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
		...	...	...	...	...	...	...	...	Nd	Nd	Nd	?		
	Bansdanga	Patanahally	...	...	...	...	...	...	...	Nd	Nd	Nd	1.13	57.04	
		Patanahally	...	...	...	...	...	...	...	Nd	Nd	Nd	1.29	72.04	
		Bansdanga	...	...	...	...	...	...	...	Nd	Nd	Nd	1.00	53.24	
		Bansdanga	...	...	...	...	...	...	...	Nd	Nd	Nd	0.78	50.00	
		Bansdanga	...	...	...	...	...	...	...	Nd	Nd	Nd	?		

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 28th of February 1890 - contd.

Meteorological Division.	District.	Station.	RAINFALL							TOTAL.		Total rain-fall since 1st of month.	Average total rain-fall from 1st of month.	Total rain-fall since 15th May 1889.	Average rainfall from 15th May to date.
			Saturday, 22nd February.	Sunday, 23rd February.	Monday, 24th February.	Tuesday, 25th February.	Wednesday, 26th February.	Thursday, 27th February.	Friday, 28th February.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL.	Noakhally	Gournadhi	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	61.31	?
		Bauphal	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	83.12	?
		Noakhali	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.01	102.64	104.71
	Farrukpore	Fenny	.....	.....	.....	.....	.....	.....	.....	0.13	0.13	0.13	1.10	79.10	107.01
		Harishpore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	91.32	?
		Ramganj	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	88.75	?
	Dacca	Madatipore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.07	62.08	54.82
		Furzedpur	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.41	72.09	57.62
		Gaolande	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.23	64.03	54.16
	Hill Tipperah	Munshingange	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.35	77.51	71.43
		Dacca	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.15	59.42	69.63
		Naraincungr	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.16	57.14	68.94
SOUTH BENGAL.	Mymensingh	Manickchungr	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.15	67.07	61.15
		Jaydehpore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	67.43	?
		Agartala	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.03	44.15	62.34
	Tipperah	Comilla	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.87	42.07	70.08
		Chandpore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.80	45.97	26.04
		Brahmuntheria	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.30	55.12	63.01
	Bogra	Ramchandrapore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	60.83	?
		Nasirnagar	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	32.30	?
		Boudkandi	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	53.74	?
		Kazda	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	62.64	?
SOUTH BENGAL.	Mymensingh	Laksham	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	60.32	?
		Kishoreganj	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	70.40	70.04
		Atia (Tangal)	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.12	61.60	50.01
	Mymensingh	Wymensingh	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.01	67.03	74.09
		Jamulpore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.00	66.01	69.23
		Nettikona	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	124.67	73.20
	Shorepore	Shorepore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	57.43	?
		Shorepore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	50.28	?
		Shorepore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	89.17	?
		Shorepore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	57.08	?
SOUTH BENGAL.	Pubna	Pubna	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.00	60.20	54.73
		Saraighat	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	1.01	60.51	63.40
		Shorepore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	62.67	54.32
	Bogra	Nowkilla	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	62.44	55.05
		Nowkilla	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	71.33	61.44
		Pauchali	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.62	60.08	56.23
	Rajshahi	Banisch	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.79	46.34	53.70
		Nattara	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.80	64.84	55.51
		Naogaon	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.41	67.67	61.53
		Laipore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	36.72	?
SOUTH BENGAL.	Malda	Malda	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	45.27	?
		Chanchal	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.64	53.43	57.03
		Gajal	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.47	51.82	53.05
	Dinapore	Stiganj	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.51	52.37	58.34
		Mohadipore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.50	63.33	63.02
		Churamoo	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.20	61.29	51.54
	Rangpur	Rangpur	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	87.81	?
		Kurigram	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.51	58.39	62.17
		Rangpur	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.39	74.08	74.04
		Rangpur	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.31	61.02	75.05
SOUTH BENGAL.	Jalpaiguri	Jalpaiguri	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.52	58.40	65.40
		Alipore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	79.16	?
		Falacolla	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.28	123.43	117.04
	Cooch Behar	Dahikata	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	110.28	?
		Bhagatpore	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	125.33	?
		(Naraila)	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	100.04	?
	Darjeeling Hill	Chitwan	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	130.22	?
		Cooch Behar	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.41	94.83	90.60
		Wickhargre	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.19	120.89	115.19
		Wickhargre	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.53	121.40	106.17
SOUTH BENGAL.	Purneah	Wickhargre	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.45	118.03	112.04
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	102.38	103.71
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.25	121.02	103.69
	North Bhagalpore	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.01	123.28	103.57
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.73	95.18	84.70
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	170.23	?
	Darrhanga	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.14	103.67	70.87
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.63	70.73	64.21
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.50	63.47	62.16
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
SOUTH BENGAL.	North Bhagalpore	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.58	60.65	50.11
	Darrhanga	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.30	67.16	68.57
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	84.16	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
	Moulvibazar	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.01	42.38	43.61
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.45	60.11	46.59
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.30	70.50	45.47
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	60.16	?
SOUTH BENGAL.	Moulvibazar	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	65.84	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	65.41	43.43
	Moulvibazar	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.41	48.47	45.40
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	0.40	42.62	42.31
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	37.00	?
	Moulvibazar	Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	41.01	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	68.18	?
		Kailash	.....	.....	.....	.....	.....	.....	.....	Nd	Nd	Nd	?	?	?

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 28th of February 1890—con.

Meteorological Division.	District.	Station.	RAINFALL.							Total.		Total rain-fall since 1st of month.	Average total rain-fall from 1st of month.	Total rain-fall since 1st of May 1889.	Average rain-fall from 1st of May 1889.
			Saturday, 22nd February.	Sunday, 23rd February.	Monday, 24th February.	Tuesday, 25th February.	Wednesday, 26th February.	Thursday, 27th February.	Friday, 28th February.	Number of rainy days.	of Rainfall week.				
NORTH BENGAL—continued.	Champan.	Motihari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	73.33	
		Buttish	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.41	62.07	
		Baouha	.....	.....	.....	.....	0.09	.....	.....	Nil	0.09	0.09	?	70.33	
		Barkurwa	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61.70	
SOUTH BENGAL	Barua	Gopalgunge	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.43	35.48	
		Choprah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	44.20	
	Bhahabad	Buxar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	40.74	
		Dahree	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	47.46	
		Rhaksobah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	45.06	
		Kasurain	.....	.....	.....	0.03	.....	.....	.....	1	0.03	0.03	?	29.40	
		Arrib	.....	.....	.....	.....	0.04	.....	.....	1	0.04	0.04	0.45	42.73	
		Mohasua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Gya	Aurungabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.33	35.42	
		Gya	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	38.83	
		Nawadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	30.20	
		Jehanabad	.....	.....	.....	.....	0.07	.....	.....	1	0.07	0.07	0.60	33.47	
		Arrib	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	34.34	
		Bandanagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	36.00	
		Shamshat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	30.20	
		Kasurain	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	17.08	
		Patri Barawan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31.90	
	Patna	Patna	.....	.....	.....	.....	0.03	.....	.....	1	0.03	0.03	0.38	51.52	
		Baranpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.39	40.33	
		Behar	.....	.....	.....	.....	0.02	.....	.....	1	0.02	0.02	0.41	41.10	
		Barh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.45	35.93	
	Mouhlyr	Buckram	.....	.....	.....	.....	0.03	.....	.....	1	0.03	0.03	?	41.23	
		Hilsa	.....	.....	.....	.....	.....	.....	.....	1	0.03	0.03	?	33.20	
		Howrah	.....	.....	.....	.....	.....	.....	.....	1	0.04	0.04	0.53	47.70	
		Mouhlyr	.....	.....	.....	.....	0.10	.....	.....	1	0.10	0.10	0.50	41.72	
	South Bhagulpore	Jamui	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.09	39.44	
		Gogri	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	39.35	
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43.23	
		Husulpore	.....	.....	.....	.....	0.02	.....	.....	1	0.02	0.02	0.43	45.08	
	North Bhagulpore	Harka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	38.34	
		Kalguc	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40.07	
		Bangson	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Bangson	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Mouhlyr Per gunnah.	Rajmahal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.27	59.40	
		Gudda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.64	49.04	
		Pakour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.35	73.30	
		Nya Dumka	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.75	50.77	
		Deonhar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.05	40.40	
		Jamtara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.35	43.31	
ORISSA NAG-PUR.	Hamirbesh	Mohasua	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60.41	
		Nawadah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	60.87	
		(Giridi)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.03	58.90	
		Rasuribesh	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.72	49.10	
		Hembarpur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.51	50.44	
		Mahade Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.28	?	
		Jhoomra Hills	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.47	43.00	
		Barkat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	31.23	
		Chitra	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44.04	
		Karagisha	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	29.33	
		Kamphar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
	Johardugga	Lohardugga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.57	45.24	
		Kanchi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1.10	23.01	
		Polonow	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.40	34.10	
		Nalla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33.60	
		Kalumar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	
		Hosainabad	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	41.40	
	Singbhoon	Gorwah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	28.77	
		Chitabana	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.86	44.70	
		Chakradhar-pore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40.80	
		Chattilla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33.70	
	Manbhoon	Beharagura	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	33.80	
		Parulla	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	43.51	
		Gobindpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.58	33.19	
		Kagharath-pore.	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	43.91	
		Barabhoon	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	44.32	
		Jaida	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	61.42	
		Chus	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53.90	

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 5th March 1890.

Rainfall.—As stated previously, a few local showers have occurred in East Bengal, Orissa, and in Behar, but the amounts have been so small that the average falls in these districts only amount to a few hundredths of an inch. The rainfall therefore during the week has been practically of no importance.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 28th of February 1890 :—

METEOROLOGICAL DIVISIONS.	TEMPERATURE						RAINFALL									
	Highest observed during week.	Lowest observed during week.	Averages for week.			Average mean of week above or below normal mean of week.	Of week.		Rainy days.		Since 1st of month.	Since 1st of May 1889.				
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.		
Orissa*	91°6	69°6	80°5	68°6	79°1	+1°5	0°03	0°16	-0°13	0°2	0°3	-0°1	0°03	0°91	68°15	56°37
South-West Bengal	96°3	51°8	80°0	63°5	76°8	+2°5	Nil	0°16	-0°15	0°0	0°3	-0°5	Nil	1°06	68°81	63°00
East Bengal	90°6	57°0	80°8	63°7	75°2	+5°0	0°04	0°16	-0°11	0°1	0°4	-0°3	0°04	1°03	70°80	75°31
North Bengal	92°5	49°7	87°1	57°5	72°3	+5°8	Nil	0°02	-0°02	0°0	0°1	-0°1	Nil	0°57	78°56	71°00
North Bihar*	85°2	50°0	86°9	54°9	69°9	+5°0	0°01	0°02	-0°01	0°1	0°1	0	0°01	0°43	57°00	48°32
South Bihar*	92°6	53°7	87°9	60°6	73°9	+5°0	0°02	0°03	-0°01	0°3	0°1	+0°2	0°02	0°44	44°18	44°30
Chutia Nagpur	87°2	55°4	84°7	59°6	72°5	+2°5	Nil	0°03	-0°13	0°0	0°2	-0°2	Nil	0°57	63°06	50°24

* Pooree, Durbhanga, Chupra and Onyehassa not included.

METEOROLOGICAL OFFICE, BENGAL ;

The 4th March 1890.

A. PEDLER,

Meteorological Reporter to the Govt. of Bengal.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 23rd February to 1st March 1890.

MONTH.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	TEMPERATURE.					HYGROMETRY.				Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Feb. 1890 ...	23rd ...	29.985	77.0	89.0	24.1	64.9	79.1	69.6	.567	64.0	60	Nil
" "	24th ...	29.997	78.7	90.0	22.6	67.4	80.0	70.8	.623	65.2	60	"
" "	25th ...	30.009	77.0	88.0	22.1	65.0	77.0	72.0	.736	70.0	78	"
" "	26th ...	29.951	78.2	92.0	27.0	64.4	81.6	70.0	.602	64.2	64	"
" "	27th ...	29.979	78.9	90.4	23.0	67.4	81.8	68.0	.523	60.2	48	"
" "	28th ...	30.017	76.7	88.0	22.7	65.3	82.0	62.7	.314	40.2	29	"
Mar. "	1st ...	29.983	76.6	88.2	23.3	64.9	79.6	73.6	.749	70.6	74	"

The mean 10 A.M. pressure of the seven days Inches. 29.990

The mean temperature of the seven days 77.6

The extreme variation of temperature 27.6

The maximum temperature 92.0

The mean 10 A.M. relative humidity of the seven days % 58

The total fall of rain from 23rd February to 1st March 1890 Inches. Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;

The 3rd March 1890.

MEMORANDUM.

DURING the month of December 1889, the total number of deaths registered in the 45 districts in Bengal amounted to 184,528, or at the rate of 33.60 per 1,000 among a population of 65,859,534, against 147,795, or 26.88 per 1,000 in the preceding month, 166,117, or 30.12 per 1,000 in December 1888, and an average of 157,454, or 28.68 per 1,000 in the corresponding month of the past five years 1884-88. There was thus a considerable increase of mortality in December 1889, as compared with corresponding past periods, which is due, not to the greater unhealthiness of December 1889, but to better registration in that month than in the corresponding periods of past years. Of the 184,528 deaths registered in December 1889, 95,844, or 35.16 per 1,000, were males, and 88,684, or 32.04 per 1,000, were females, the former being to the latter in the proportion of 109 to 100.

2. In the following districts deaths were registered at the highest rates, the rates at which deaths were registered in the corresponding month of 1888 are also shown:—

Districts.	Ratio per mille during—		Districts.	Ratio per mille during—	
	Dec. 1889.	Dec. 1888.		Dec. 1889.	Dec. 1888.
Backerganj	65.92	41.40	Faridpore	41.40	28.41
Dinajpur	62.80	42.80	Dacca	30.32	38.60
Noakhali	62.63	34.64	Monghyr	30.00	28.44
Jessore	61.00	46.32	Tipperah	30.61	32.01
Jalpaiguri	49.44	48.44	24-Pergunnahs	31.92	40.92
Poori	49.20	27.24	Pubna	31.68	32.64
Balasore	48.72	28.68	Midnapore	34.32	28.41
Cuttack	46.68	24.78	Maldah	34.20	50.76
Hughli, including Serampore	46.00	31.80	Chittagong	32.64	23.40
Bogra	45.00	30.72	Darjiling	32.44	24.20
Howrah	43.20	34.60	Bhagulpore	31.08	25.92
Rungpore	42.72	38.76	Barham	30.60	31.80
Rajshahye	42.68	33.60	Purneah	30.60	40.66
Khulna	42.12	45.60	Mymensing	30.36	24.60

3. The table in the margin exhibits the rates at which the population suffered from the various death-causes in December 1889 as compared with the corresponding month of the preceding year and the average rate of 1884-88:—

	Ratio per mille during—		
	December 1889.	December 1888.	Mean of previous five years, 1884-88.
Cholera	1.80	1.92	2.40
Small-pox	.08	.07	.04
Fever	25.32	22.56	21.24
Bowel-complaints	.96	.84	.84
Injury	.12	.12	.12
Other causes	4.92	4.44	3.72

It will be seen that the mortality from fever was, as usual, very high, and that there were more deaths from the diseases classed under the head of "Other causes" in December 1889 than in the past periods with which that month is compared.

4. The districts in which the greatest loss of life occurred from cholera, fever, and the unspecified maladies coming under the head of "Other causes" are:—

Cholera.		Fever.		Other Causes.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Faridpore	9.36	Dinajpur	49.32	Poori	24.96
Dacca	7.20	Jalpaiguri	46.56	Backerganj	17.16
Jessore	7.08	Noakhali	44.64	Cuttack	12.00
Howrah	6.44	Jessore	40.68	Balasore	11.68
Poori	6.02	Faridpore	39.36	Saran	10.08
Cuttack	4.92	Rajshahye	37.68		
Balasore	4.32	Bogra	37.82		
24-Pergunnahs	3.84	Backerganj	34.44		
Tipperah	3.84	Monghyr	33.12		
Hughli, including Seram-	3.60	Pubna	32.04		
pore.		Khulna	31.66		
Khulna	3.12	Maldah	31.08		
Backerganj	3.00	Hughli, including Seram-	30.60		
Noakhali	2.40	pore.			
		Purneah	29.40		
		Chittagong	27.60		
		Faridpore	26.04		
		Darjiling	25.80		
		Tipperah	25.80		
		Bhagulpore	25.32		
		Cuttack	25.32		

Small-pox prevailed noticeably high only in the Poori district (mortality 1.32 per 1,000 of population).

5. The following statement shows the rates of mortality distributed according to Class and Age.

According to Class.			According to Age.		
		Ratio per mille.			Ratio per mille.
Christians	...	18.48	Under 1 year	...	253.68
Hindus	...	32.04	1 and under 5 years	...	36.96
Mahomedans	...	38.04	5 " 10 "	...	16.92
Buddhists	...	28.68	10 " 15 "	...	13.44
Other classes	...	17.04	15 " 20 "	...	20.40
			20 " 30 "	...	19.92
			30 " 40 "	...	22.56
			40 " 50 "	...	30.84
			50 " 60 "	...	48.12
			60 years and upwards	...	91.44

W. H. GAZOG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

The 4th March 1890.

Statement showing the Results of the Registration of Deaths in the Districts in Bengal for the month of December 1849

[illegible]

MORTALITY ACCORDING TO—		CLASS.										AGE.										MORTALITY PER 1,000 OF POPULATION PER ANNUM.																		
DIVISIONS.	DISTRICTS.	LEATHS AND—										Males.	Females.	MORTALITY PER 1,000 OF POPULATION PER ANNUM.										MORTALITY PER 1,000 OF POPULATION PER ANNUM.																
		Christians.	Hindus.	Mahomedans.	Buddhists.	(Other classes.)	Christians.	Males.	Females.	(Other classes.)																														
BENGAL.	Bardham	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Barrackpore	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Calcutta	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Howrah	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Total (Hugli included.)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
BENGAL.	Bardham	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Barrackpore	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Calcutta	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Howrah	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Total (Hugli included.)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
BENGAL.	Bardham	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Barrackpore	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Calcutta	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Howrah	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Total (Hugli included.)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
BENGAL.	Bardham	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Barrackpore	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Calcutta	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Howrah	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Total (Hugli included.)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
BENGAL.	Bardham	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	Barrackpore	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Calcutta	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Howrah	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
	Total (Hugli included.)	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1					

Office of Sanitary Commissioner for Bengal,
The 1st March 1890.
W. H. Greco, Dip. Publ. Health, Camb.,
Sanitary Commissioner for Bengal.

MEMORANDUM.

The principal Municipalities in Bengal presented, during the week ending 15th February 1890, a birth-rate of 21·7 per 1,000 of population, against 23·8 per 1,000 in the preceding week ending 8th February, showing a decrease in registration, the death-rate returned by these Municipalities was 24·1 per 1,000 of population against very nearly the same proportion, viz., 23·9 per 1,000 in the previous week.

2. The following Municipalities registered the highest proportions of births and deaths:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Narainganj	...	45·5	Poori	...	117·5
Monghyr	...	38·9	Narainganj	...	68·0
Darjiling	...	37·0	Darjiling	...	44·5
Arrah	...	34·7	Jessore	...	42·8
Serampore	...	23·4	Gya	...	41·7
			Uterpara	...	37·7
			Serampore	...	37·3
			Burdwan	...	36·1
			Rampore Beaulah	...	31·5
			Kishnaghur	...	30·3

3. In comparison with the results of the preceding week, the only noticeable point is that there was a decrease in mortality from fever, *vide* figures below:—

		Ratio per mille during the weeks ending—	
		15th February 1890.	8th February 1890.
Cholera	...	3·1	2·3
Small-pox	...	·8	1·1
Fever	...	9·1	10·3
Bowel-complaints	...	3·4	2·3
Injury	...	·5	·5
Other causes	...	7·2	6·1

4. The highest rates of deaths from cholera, fever and maladies coming under the head of "Other causes" were returned from the following Municipalities:—

Cholera.		Fever.		Other causes	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Poori	39·8	Darjiling	20·6	Poori	18·9
Gya	8·9	Kishnaghur	24·0	Serampore	17·5
Howrah	4·6	Jessore	21·5	Midnapore	17·0
		Rampore Beaulah	23·6	Narainganj	16·6
		Poori	23·1	Gya	10·9
				Bhagulpore	10·9

The mortality from small-pox in the Poori town, although still high, was considerably less than that of the preceding week ending 8th February, viz., 23·1 against 39·8 per 1,000 of population.

5. Classified according to Sex, Class and Age, the mortality of the week stood as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males	27·0	Christians	29·9	Under 1 year	153·6
Females	21·0	Hindus	24·5	1 and under 5 years	28·5
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population	129	Mahomedans	22·9	5 " 10 "	11·3
		Other classes	70·8	10 " 15 "	10·3
				15 " 20 "	9·0
				20 " 30 "	12·3
				30 " 40 "	17·5
				40 " 50 "	22·0
				50 " 60 "	30·9
				60 years and upwards	70·9

The 3rd March 1890.

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

POPULATION.		BIRTHS.				DISEASE.												SEX.										
NAMES OF MUNICIPALITIES.	Total.	NUMBERS OF -		RATIO PER 1,000 OF POPULATION PER ANNUM.		Ratio of male births to every two female births.	RATIO PER 1,000 OF POPULATION PER ANNUM.												Males.	Females.								
		Males.	Females.	Total.	Ratio of male births to every two female births.		Cholera.	Small-pox.	Fever.	Measles-cum-pneumonia.	Injury.	Other diseases.	All causes.	Cholera.	Small-pox.	Fever.	Measles-cum-pneumonia.	Injury.			Other diseases.	All causes.	Ratio of deaths per 1,000 of population per annum in the preceding week.					
Bardwan	16,000	16,017	34,000	12	6	17	10.3	7.6	35.9	340	13	4	1	5	52	...	19.9	6.1	1.6	7.6	35.1	32.1	12	11	34.5	35.7	97	
Midnapore	14,977	14,033	31,000	4	2	6	6.2	3.1	9.3	2.0	1	3	1	11	18	...	15	4.6	...	17.0	25.4	31.0	8	7	24.6	31.9	112	
Howrah	15,000	12,000	27,000	5	6	14	13.1	9.6	28.0	130	8	2	1	3	17	...	16.5	3.3	1.4	4.9	27.9	43.9	9	8	29.3	36.3	115	
Calcutta	13,350	12,007	24,000	7	10	17	13.7	19.6	33.4	70.4	1	1	1	9	19	...	2.0	9.8	2.0	17.6	37.5	47.1	12	6	40.9	26.1	207	
Chittagong	2,446	2,444	8,010	2	1	3	18.9	9.4	28.3	2.9	...	...	...	1	4	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Barisal	63,120	37,000	90,010	15	20	36	8.6	13.8	21.8	43	9	4	...	10	24	...	6.1	8.1	...	6.7	20.6	19.5	19	17	18.6	23.6	178	
Rangoon	7,000	6,779	14,010	3	1	3	7.0	3.5	10.3	200	3	2	...	1	6	...	7.0	...	...	3.8	41.1	38.1	4	3	20.5	16.9	178	
Madras	12,000	14,116	27,457	8	2	10	15.1	8.5	18.9	4.0	13	...	...	2	16	...	20.6	...	...	3.0	30.3	3.7	10	6	30.7	25.4	178	
Calcutta	4,000	4,000	8,000	1	1	2	6.0	6.0	12.0	100	1	...	...	...	1	...	6.0	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	11,700	13,779	29,627	4	6	12	10.5	10.5	21.0	1.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	4,500	3,400	8,400	1	2	3	4.1	15.2	19.4	50	4	...	...	1	7	...	2.5	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	9,000	19,701	39,402	6	8	11	16.8	13.1	29.9	18	9	...	...	2	12	...	23.6	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	4,570	2,439	7,010	3	3	6	14.5	22.2	37.0	64	4	...	...	2	4	...	29.6	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	48,700	37,379	86,079	11	19	23	7.1	7.8	14.9	31	4	4	1	8	16	...	2.6	3.6	6	8.2	11.7	14.3	11	7	15.4	9.7	138	
Calcutta	7,000	4,000	11,000	5	6	11	20.7	24.5	45.3	83	4	3	...	4	14	...	16.6	13.4	...	16.6	28.6	37.3	11	3	25.2	31.6	238	
Calcutta	13,540	8,700	22,240	7	3	10	16.4	7.0	23.5	231	4	3	...	4	9	...	16.6	13.4	...	16.6	28.6	37.3	11	3	25.2	31.6	238	
Calcutta	8,135	5,253	13,388	2	3	5	7.7	11.5	19.3	66	1	...	...	1	6	...	11.3	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	78,700	81,475	160,257	14	16	32	5.5	4.5	10.4	124	8	...	...	23	52	...	6.8	1.4	...	7.3	16.9	11.7	23	27	16.3	17.3	86	
Calcutta	24,220	37,351	75,151	19	19	38	13.0	13.0	26.0	101	13	4	1	3	16	...	19.1	...	...	10.9	41.7	54.8	31	20	42.1	41.0	102	
Calcutta	20,000	22,805	43,405	14	13	29	10.1	15.8	24.7	125	...	3	...	...	12	...	4.9	1.4	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	23,000	19,488	42,742	11	3	14	8.6	8.6	17.6	81	...	...	...	11	23	...	8.6	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	53,774	32,322	64,096	17	21	38	13.4	16.4	29.9	108	...	...	...	...	...	...	4.9	1.4	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	25,116	16,454	31,670	13	12	25	12.1	18.1	35.3	106	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	39,640	47,815	87,455	10	19	29	9.0	17.5	29.2	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	23,184	29,800	52,984	18	26	44	10.9	23.4	34.9	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	8,465	8,463	16,928	2	3	5	6.9	10.6	17.8	66	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Calcutta	12,347	11,857	24,704	1	...	1	8.1	...	8.4	Not given	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	No female death.
Total	50,000	510,000	1,010,000	236	220	464	10.9	10.9	21.7	103	6	17	186	10	327	692	3.1	9.1	3	7.3	26.1	23.9	206	206	27.9	31.9	139	

[illegible]

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 1st March 1890,
as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 1st MARCH 1890.			WEEK ENDING SATURDAY, THE 2nd MARCH 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	1,385	2,31,375	9,764	1,113	2,81,000	6,008
Jute	149	61,000	1,107	67	50,000	923
Firewood	73	44,525	670	195	1,07,720	1,605
Other articles	1,025	2,53,000	3,439	1,166	2,52,045	4,695
Total	2,632	5,89,950	9,470	2,541	7,22,910	12,291

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 22nd February 1890, on 1,625½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).		Total earnings.		TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.					Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.				
Total traffic for the week ...	381,002	3,21,779 6 0	27,54,205 30	6,21,895 1 0	21,513 15 0	0,60,188 0 0	69,409	80,555	164,967		
Under mile of railway ...	2 1 9 5			407 10 5	14 2 8	0 3 5 4					
For previous 7 weeks of half-year ...	1,722,109	19,73,886 7 0	1,70,72,074 20	39,43,000 11 0	1,32,310 12 0	60,49,645 14 0	446,513	669,617	1,039,130		
Total for 8 weeks ...	2,000,611	22,95,665 13 0	1,98,27,149 10	48,86,000 12 0	1,54,324 11 0	70,15,594 4 0	514,732	690,172	1,204,904		
COMPARISON.											
Total for corresponding week of previous year ...	276,059	3,35,492 2 11	26,63,794 30	6,07,170 5 0	14,740 7 3	9,47,411 15 11	69,966	97,964	167,770		
Percentage railway correspond. ...		213 5 11		200 0 3	9 10 8	621 0 10					
Total to corresponding date of previous year ...	1,994,976	23,30,687 12 4	2,70,12,283 30	47,87,954 2 0	1,19,396 1 3	75,37,037 15 7	515,553	708,734	1,224,117		

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 23RD FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 23RD FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 23RD FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 23RD FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1890.
Mean distance worked	Receipts.	Per mile worked.	Mean distance worked.	Receipts.	Per mile worked.	Mean distance worked.	Total receipts.	Per mile worked per week.	Mean distance worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
1,125½	9,47,413	631	1,625½	9,66,108	633	1,625½	2,97,76,763	665	1,625½	3,96,39,077	651	.....	2,44,429

PATNA-GYA STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd February 1890, on 57½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	12,462	8,227 8 0	23,289 10	2,494 7 0	48 7 0	10,770 6 0	1,932	628	2,560
Or per mile of railway	216	143 13 8	409 20	43 9 9	0 13 6	183 4 8	.....	.....	.....
For previous 7 weeks of half-year	84,306	44,552 1 0	2,44,484 20	16,045 3 0	334 8 0	60,931 6 0	11,667	4,670	16,337
Total for 8 weeks	96,768	52,779 9 0	2,78,744 0	18,539 0 0	383 6 0	71,701 1 0	13,609	5,298	18,907
COMPARISON.									
Total for corresponding week of previous year	10,310	8,741 15 4	56,083 20	2,396 16 0	40 3 3	11,038 12 7	1,947	657	2,604
Per mile of railway corresponding week of previous year	258	182 13 3	1,044 0	39 7 3	0 11 5	193 15 9	.....	.....	.....
Total to corresponding date of previous year	99,376	53,216 15 6	2,62,619 20	14,140 1 0	276 9 0	67,033 9 8	14,823	4,883	19,706

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
57½	11,039	193	57½	10,770	185	57½	4,36,398	102	57½	4,63,704	169	17,402	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 22nd February 1890, on 23½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	2,764	6,981 14 0	13,084 20	428 8 0	7 4 0	7,431 10 0	1,104	84	1,188
Or per mile of railway	215	296 12 8	.....	19 14 2	0 8 3	319 0 1	.....	.....	.....
For previous 7 weeks of half-year	135,962	33,431 1 0	90,913 10	2,131 10 0	47 13 0	36,410 8 0	6,693	481	7,174
Total for 8 weeks	138,726	40,412 15 0	1,03,948 0	2,574 2 0	55 1 0	43,942 2 0	7,797	565	8,362
COMPARISON.									
Total for corresponding week of previous year	23,882	5,932 4 3	11,394 20	428 10 0	7 3 0	6,372 0 3	890	78	968
Per mile of railway corresponding week of previous year	.....	256 9 11	.....	19 7 1	0 8 1	286 6 1	.....	.....	.....
Total to corresponding date of previous year	160,702	40,840 3 9	74,513 0	2,396 15 0	52 1 9	43,807 2 6	6,945	513	7,458

Approximate Statement of gross receipts of the Tarkeessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
23½	6,372	286	23½	7,431	316	23½	2,50,389	239	23½	2,47,515	237	.....	2,876

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 15th February 1890, on 747 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boats.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week...	142,370	85,090 0 0	5,97,510 0	1,02,080 0 0	16,300 0 0	1,04,070 0 0	22,120	28,170	51,130
per mile of railway	191	115 0 0	800	137 0 0	21 0 0	23 0 0	...	...	...
for previous 5 weeks of half-year	917,790	4,48,880 0 0	35,40,470 0	7,68,030 0 0	1,03,360 0 0	12,80,370 0 0	128,271	193,770	322,041
Total for 7 weeks	1,060,160	5,34,570 0 0	41,40,980 0	8,70,110 0 0	2,19,660 0 0	18,24,940 0 0	151,411	221,940	373,351
COMPARISON.									
Total for corresponding week of previous year	615,245	94,185 0 0	4,73,904 0	78,097 0 0	18,212 0 0	1,02,494 0 0	22,472	22,000	44,472
per mile of railway corresponding period of previous year	231	140 0 0	704 0	113 0 0	25 0 0	27 0 0	...	...	...
Total to corresponding date of previous year	987,250	5,14,445 0 0	33,31,167 0	6,68,550 0 0	1,11,042 0 0	12,91,940 0 0	148,100	181,833	330,000

* Excluding steamer earnings.
 a Due to Purnima Bathing festival.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
1,85,494	270	747	2,04,070	273	673	95,33,429	307	720	1,02,30,430	300	7,55,901		

* Audited up to week ending 31st December 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 15th February 1890, on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week...	20,090	10,120 0 0	54,310 0	2,070 0 0	60 0 0	12,250 0 0	3,736	1,934	5,672
per mile of railway	200	81 0 0	434 0	25 0 0	...	100 0 0	...	...	...
for previous 5 weeks of half-year	180,600	60,450 0 0	2,59,550 0	12,800 0 0	460 0 0	76,410 0 0	30,814	20,783	51,601
Total for 7 weeks	180,690	70,570 0 0	3,12,860 0	15,570 0 0	520 0 0	80,000 0 0	24,550	12,754	37,304
COMPARISON.									
Total for corresponding week of previous year	29,830	11,041 0 0	59,761 0	2,630 0 0	65 0 0	12,765 0 0	3,753	1,937	5,690
per mile of railway corresponding period of previous year	234	98 0 0	479 0	21 0 0	1 0 0	110 0 0	...	...	...
Total to corresponding date of previous year	186,466	61,083 0 0	3,27,102 0	16,277 0 0	3,624 0 0	86,164 0 0	25,127	13,612	38,739

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
12,765	110	125	15,250	100	125	6,51,819	110	125	6,40,111	113	17,792		

* Audited up to week ending 31st December 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 15th February 1890, on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	15,700	Rs. A. P. 6,570 0 0	Mds. s. 22,950 0	Rs. A. P. 2,610 0 0	Rs. A. P. 220 0 0	Rs. A. P. 8,410 0 0	2,450	750	3,200
Or per mile of railway ...	183	74 0 0	267 0	30 0 0	3 0 0	100 0 0	.....	.....	.....
For previous 5 weeks of half-year ...	84,830	34,753 0 0	1,50,670 0	19,040 0 0	1,100 0 0	34,950 0 0	13,918	4,014	17,932
Total for 7 weeks ...	100,530	41,190 0 0	2,00,720 0	21,080 0 0	1,320 0 0	43,570 0 0	16,366	5,764	22,130
COMPARISON.									
Total for corresponding period of previous year ...	15,225	4,575 0 0	12,303 0	1,315 0 0	90 0 0	5,967 0 0	2,482	751	3,233
Per mile of railway corresponding period of previous year ...	177	53 0 0	143 0	15 0 0	1 0 0	74 0 0	.....	.....	.....
Total to corresponding date of previous year ...	103,491	31,575 0 0	61,233 0	8,734 0 0	1,236 0 0	41,545 0 0	16,691	4,312	21,003

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 15TH FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 15TH FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Rs.	Rs.
86	Rs. 4,347	74	86	Rs. 8,610	100	86	Rs. 2,65,019	31	86	Rs. 3,49,818	40	Rs. 84,799	.....

* Audited up to week ending 31st December 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 22nd February 1890, on 27½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	4,715	Rs. A. P. 1,515 0 0	Mds. s. 13,741 0	Rs. A. P. 939 0 0	Rs. A. P. 9 0 0	Rs. A. P. 2,463 0 0	500	500	1,000
Or per mile of railway ...	173	55 0 0	503 0	34 0 0	.....	90 0 0	.....	.....	.....
For previous 5 weeks of half-year ...	19,565	69,505 0 0	88,774 0	5,681 0 0	90 0 0	12,963 0 0	3,345	3,345	6,690
Total for 7 weeks ...	24,280	8,821 0 0	1,02,515 0	6,610 0 0	105 0 0	15,444 0 0	3,851	3,851	7,702
COMPARISON.									
Total for corresponding week of previous year ...	3,374	1,990 0 0	19,348 0	972 0 0	17 0 0	2,979 0 0	500	417	917
Per mile of railway corresponding week of previous year ...	124	47 0 0	563 0	36 0 0	1 0 0	84 0 0	.....	.....	.....
Total to corresponding date of previous year ...	25,241	9,824 0 0	1,21,160 0	6,746 0 0	122 0 0	16,392 0 0	3,856	4,273	8,129

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Rs.	Rs.
27½	Rs. 2,270	84	27½	Rs. 2,455	90	27½	Rs. 91,035	75	27½	Rs. 91,460	75	.....	.....

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 22nd February 1890, on 273 miles open.

	PASSENGER TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings—estimated.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	44,004	18,094 0 0	3,44,448 0	36,470 0 0	3,754 0 0	54,300 0 0	5,000	19,145	16,130
Or per mile of railway ...	160	66 0 0	1,262 0	134 0 0	13 0 0	200 0 0	...	...	...
For previous 6 weeks of half-year ...	250,000	1,44,800 0 0	17,00,059 0	1,56,514 0 0	28,190 0 0	3,72,210 0 0	61,521	24,054	109,450
Total for 7 weeks ...	275,294	1,62,894 0 0	20,44,507 0	1,93,024 0 0	32,616 0 0	4,51,100 0 0	67,521	24,054	116,000
COMPARISON.									
Total for corresponding week of previous year ...	44,147	19,587 0 0	1,55,214 0	14,812 0 0	2,841 0 0	37,210 0 0	5,820	7,047	12,866
Or per mile of railway corresponding week of previous year ...	162	72 0 0	570 0	54 0 0	1 0 0	127 0 0	...	...	...
Total to corresponding date of previous year ...	276,541	1,22,063 0 0	10,74,811 0	99,974 0 0	24,865 0 0	2,47,102 0 0	67,729	44,414	66,140

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1889.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
273	57,210	134	273	54,809	200	245-21	14,00,005	125	273	19,19,045	164	4,31,340	...

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Rs.

Approximate earnings for week ending 8th February 1890 ...

7,732

Corresponding period of 1889 ...

6,636

Increase ...

1,097

Receipts per mile for week ending 8th February 1890 ...

Rs. A. P.
151 9 9

Corresponding period of 1889 ...

130 1 7

Increase ...

21 8 2

Receipts from 1st January to 8th February 1890 ...

40,939

Corresponding period of 1889 ...

39,604

Increase ...

1,335

DARJEELING-HIMALAYAN RAILWAY COMPANY, LIMITED.

Rs.

Approximate earnings for week ending 16th February 1890 ...

9,326

Corresponding period of 1889 ...

8,162

Increase ...

1,164

Receipts per mile for week ending 16th February 1890 ...

Rs. A. P.
183 13 2

Corresponding period of 1889 ...

160 0 8

Increase ...

23 12 6

Receipts from 1st January to 16th February 1890 ...

50,314

Corresponding period of 1889 ...

47,668

Increase ...

2,646



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MARCH 12, 1890.

OFFICIAL PAPERS.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.

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LIBERALITY OF BABU BRIJA MOHAN THAKUR AND RAI HARI MOHAN THAKUR BAHADUR.

GENERAL DEPARTMENT—EDUCATION.

Calcutta, the 5th March, 1890.

RESOLUTION.

READ—

Endorsement from the Director of Public Instruction No. 1088, dated the 27th February last, and its annexure.

The Lieutenant-Governor has learnt with pleasure that Baboo Brij Mohan Thakur and Rai Hari Mohan Thakur, Bahadur, of Bhagulpore have made a donation of Rs. 1,000 in aid of the funds of the Behar Sanskrit Sanjivan Sabha, and desires officially to recognise the liberality and public spirit of the donors.

ORDER.—Ordered that a copy of this Resolution be published in the *Calcutta Gazette*, and that a copy of it be forwarded to the Director of Public Instruction for information and communication to the donors.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secy. to the Govt. of Bengal.

**APPOINTMENT OF DEPUTY MAGISTRATES AND DEPUTY
COLLECTORS DURING THE YEAR 1890.**

RESOLUTION.

APPOINTMENT DEPARTMENT.

Dated the 11th March 1890.

READ—

The Resolution, dated the 24th April 1889, regarding the recruitment of the Subordinate Executive Service.

Read—

The Notification, dated the 1st June 1889, publishing the rules for the examination held in February 1890.

The results of the Subordinate Executive Service examination held in February 1890 having been received, the Lieutenant-Governor directs that, in accordance with the orders contained in paragraph 14 of the Resolution and paragraph 6 of the Notification read in the preamble, the following gentlemen be declared to be eligible for appointment as Deputy Magistrates and Deputy Collectors during the year 1890:—

1. Baboo Ram Nath Chatterjee, M.A.
2. Moulvie Mahomed Abbas Ali, M.A.
3. Baboo Bisseswar Bhattacharjee, B.A.
4. „ Benode Behary Sircar, late Special Deputy Collector.
5. „ Gobind Chunder Das, M.A.
6. Moulvie Sheik Abdulla, Special Deputy Collector.
7. Baboo Promotha Nath Dutt, B.A.
8. Moulvie Syed Ali Hossein, B.A.
9. Baboo Brojo Durlab Hazra, B.A.
10. „ Nobin Chunder Ker, B.A.
11. „ Prosonno Kumar Das Gupta, B.A.
12. „ Jogendro Nath Sen, Special Deputy Collector.

Of the twelve gentlemen appearing in the above list, six are those who obtained the first six places in the competitive examination, three have been nominated from among those registered candidates who have obtained not less than one-third marks in the examination, and three are Special Deputy Collectors who have been selected for promotion. Those among the above 12 selected candidates who are not already in Government service will be posted to the head-quarters of various districts as probationers on a subsistence allowance of Rs. 50 per mensem, and will be employed on general work of such a kind as may be allotted to them by the District Magistrate. They will be appointed to fill vacancies in the Subordinate Executive Service, as they occur, according to the position assigned to them in the above list.

The following gentlemen, who are on the list of registered candidates and who have obtained upwards of one-third marks in the examination, are declared eligible for appointment to the post of Deputy Magistrate and Deputy Collector, should any vacancies occur during the year after the appointment of the twelve gentlemen above mentioned:—

- Baboo Bunku Behari Singh, M.A., B.L.
„ Rakhal Chunder Banerjee, B.A.

ORDER.—Ordered that the above Resolution be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

JOHN EDGAR,

Chief Secy. to the Govt. of Bengal.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government during the week ending the 8th March 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
<i>Western Districts.</i>			
1	Burdwan March 8, '90 Ranigunge	Nil 0.03	Weather—cool for the time of year. <i>Rubbi</i> is being harvested and sugarcane pressed. Prospects favourable. Prices of common rice:— <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: right;"> Burdwan ... Cutwa ... Ranigunge ... </div> <div style="text-align: center;"> Sra. 17½ 16½ 19 </div> <div style="font-size: 2em; margin: 0 10px;">}</div> <div>per rupee</div> </div>
2	Bankoora .. 8, '90	0.47	Weather—a little cooler. <i>Rubbi</i> harvest and pressing of sugarcane proceeding. Rainfall of the week too small to help ploughing for the next rice. Common rice selling at 21 seers per rupee at Bankoora and 19½ seers at Bishenpore.
3	Birbhum .. 8, '90 Raipore Haut	0.35 0.07	The nights are still cool. State and prospects of crops continue good: all the better for the slight rain. Sugarcane being pressed. Price of rice in the southern half of the district ranges from 19 to 20 seers per rupee, and in the northern half from 18 to 19 seers.
4	Midnapur .. 8, '90	0.23	Weather—seasonable. <i>Rubbi</i> being harvested with good results. Prices of common rice:— <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: right;"> Sudder ... Tamluk ... Contai ... Ghatal ... </div> <div style="text-align: center;"> Sra. 18 19 24 19 </div> <div style="font-size: 2em; margin: 0 10px;">}</div> <div>per rupee</div> </div>
5	Hoochly .. 8, '90	Nil	Weather—seasonable. State and prospects of crops good. Prices of common rice:— <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: right;"> Sudder ... Serampore ... Jehansabad ... </div> <div style="text-align: center;"> Sra. 12½ 14 17½ </div> <div style="font-size: 2em; margin: 0 10px;">}</div> <div>per rupee.</div> </div>
	Howrah .. 8, '90	Nil	Weather—warm in the day, but cool at night. State and prospects of crops good.
<i>Central Districts.</i>			
6	24-Pergha. March 8, '90	Drizzling	Weather—rather warm. Prospects of crops good. Ploughing going on in some parts. Price of common rice 15 to 16 seers per rupee.
7	Nudda .. 8, '90 Koochta .. Moherpar ..	Nil 0.15 0.07	Weather—cloudy. Prospects of crops on the ground favourable. Linseed, peas, <i>mussuri</i> , wheat, and barley being reaped; outturn may be 12 annas. Cultivation of land for early rice going on.
8	Khoolna .. 8, '90	0.25	Weather—foggy in the morning and days warm. Condition of <i>boro</i> and <i>rubbi</i> crops good.
9	Jessore .. 8, '90 Magura ..	Nil 0.04	Weather—cloudy and hot in the day, but cool in the night. Ploughing of rice lands going on. Rain wanted. Linseed and pulses being reaped. Prices of rice stationary.
10	Moorsheadabad .. 8, '90 Kandi ..	0.15 0.25	Weather—clear and cool. Lands being prepared for <i>aus</i> . <i>Boro</i> being sown. <i>Rubbi</i> still being cut and gathered.
11	Dinagapur .. 8, '90	Nil	Weather—seasonable; getting hot. Land is being ploughed for <i>shadoi</i> . Sugarcane being pressed.
12	Rajshahye .. 8, '90 Nattore ..	Nil 0.08	Weather—seasonable; growing warm. Rain wanted. Outturn of those cold-weather crops that are being harvested is good. Crops on the ground coming on nicely, and prospects satisfactory.
13	Rangpur .. 8, '90	Nil	Weather—dry with hot westerly wind; cool nights. <i>Aus</i> is being sown in some places. Other standing crops doing well.
14	Bogra .. 8, '90 Sherpur ..	0.09 0.03	Weather—seasonable. Land is being cultivated for <i>aus</i> , <i>til</i> , and jute, and in some low lands sowing has commenced. Standing crops (peas, gram, &c.) reported to be good. In some places sugarcane is being cut, while in others it is being transplanted. Common rice selling at 18 seers per rupee.
15	Pabna .. 8, '90	0.23	Weather—seasonable. Mustard and tobacco expected to yield 12 annas. Gram and wheat being cut in the Srajangunge subdivision, and the outturn expected to be 16 annas.
16	Darjeeling .. 8, '90	Nil	Weather—cold and bright. Crops doing well, and prospects generally good.
17	Jalpigoree .. 8, '90	Nil	Weather—fair with dry west wind. General prospects of standing crops good. Prices stationary.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.															
BENGAL—concluded.																		
Eastern Districts.																		
Dacca Divn.	18 Dacca March 8, '90	Nil	Weather—days getting hot, but nights are cool. Winter crops doing well. <i>Til</i> and paddy being sown. Mustard and sugarcane being out. No special change in the prices of food-grains. Common rice 14 to 16 seers per rupee.															
	19 Farreedpur .. 8, '90	Nil	Weather—days hot, but nights cool; cloudy at intervals. Prospects of crops on the ground fair. Rain wanted for <i>cheena</i> and <i>kaon</i> and for jute and <i>aus</i> sowings. Linseed, mustard, and tobacco being harvested with an outturn of more than eight annas. Common rice is selling at— <table><tr><td>Sudder</td><td>...</td><td>...</td><td>...</td><td>16 0</td></tr><tr><td>Gosulondo</td><td>...</td><td>...</td><td>...</td><td>16 13</td></tr><tr><td>Madaripur</td><td>...</td><td>...</td><td>...</td><td>15 0</td></tr></table> } per rupee.	Sudder	16 0	Gosulondo	16 13	Madaripur	15 0
	Sudder	16 0													
	Gosulondo	16 13													
	Madaripur	15 0													
20 Backergunge .. 8, '90	Nil	Weather—seasonable. Prospects of <i>rabbi</i> crops fair. Common rice selling at 13 seers per rupee.																
21 Mymensingh .. 8, '90	Nil	Weather—seasonable. Prospects of crops good. Coarse rice selling at 14 seers per rupee.																
Chittagong Divn.	22 Chittagong .. 8, '90	0-07	Weather—seasonable; still cool at night. Rain urgently wanted for winter crops. Common rice selling at 15 seers 12 chittacks per rupee.															
	23 Noakhally .. 8, '90	Nil	Weather—unsettled. Harvesting of <i>rabbi</i> crops continues. Preparation of soil for <i>aus</i> going on. Rain wanted.															
	24 Tipperah .. 8, '90	Nil	Weather—cool at night, warm in the day. Chillies and tobacco thriving. Rain wanted for <i>boro</i> paddy. Land being prepared for <i>aus</i> and jute.															
	25 Chittagong Hill Tracts. .. 7, '90	0-88	Weather—slightly cold in the morning. Sun becoming hot and unbearable gradually. A copious shower of rain with hail-stones on the 28th ultimo <i>Jum</i> cutting continues. Sugarcane being planted. Tobacco and chillies doing well. Rain on the 28th February has improved condition of standing crops to some extent. Middle class rice selling at 13 seers per rupee and inferior and lower class rice at 16 seers per rupee.															
	BEHAR	Hill Tipperah March 8, '90	0-31	Weather—getting warm. Sugarcane and tobacco being gathered. <i>Jum</i> being cut in the hills.														
PATNA Divn.	26 Patna .. 8, '90	Nil	Weather—generally cloudy with strong wind. Harvesting of <i>rabbi</i> in progress. Collection of opium continues. Prospects favourable. Mango crop damaged by cloudy weather and light rain during the last week. Prices of food-grains almost stationary.															
	27 Gaya .. 8, '90	0-20	Weather—cloudy. Extraction of opium going on. <i>Rabbi</i> crops being harvested.															
	28 Shahabad .. 8, '90	0-06	Weather—warm and cloudy with some showers. Opium and mango blossoms damaged by showers. Wheat and barley ready for cutting. Prices stationary.															
	Buxar ..	0-21																
	Sasaram ..	0-85																
	Bhabuah ..	0-40																
	29 Darbhanga .. 8, '90	...	Weather—cloudy; a strong west wind with slight rain on the night of the 5th. Harvesting of peas, <i>khacori</i> , and linseed in progress. Mango blossoms partially injured by rain. Opium still being extracted. Indigo sowing in progress. Lands being prepared for sowing <i>wang</i> and paddy. Common rice selling at 18½ seers per rupee at Sudder.															
	30 Mozufferpur .. 8, '90	0-11	Weather—cool. Rain on the 5th instant general; still cloudy at end of week. Cutting of <i>rabbi</i> crops commenced in places; 12 to 16 annas outturn expected. Indigo sowings nearly completed. In Sitamarhi indigo had to be sown in some places after the rain, but in the south the rain does not appear to have damaged the first sowings.															
	Hajipur ..	0-7																
	Sitamarhi ..	0-4																
BHOJPORE Divn.	31 Saran .. 8, '90	0-11	Weather—cloudy. Prospects of <i>rabbi</i> excellent. Weather has been unfavourable for poppy; its prospects, however, continue to be good.															
	32 Champarn .. 8, '90	0-19	Weather—warm with west wind, but nights still cool. Reaping of <i>rabbi</i> and extraction of opium commenced. Mango blossoms slightly damaged by thunder and lightning which accompanied the showers of rain on the 5th.															
	33 Monghyr .. 8, '90	Nil	Weather—generally cloudy. A few drops of rain fell at Sudder on the 4th. Harvesting of peas, mustard, and linseed going on. Wheat and barley ripening. Prices of food-grains almost stationary.															
	Begusserai ..	0-5																
	Jamui ..	0-10																
	34 Bhagulpur .. 8, '90	Nil	Weather—cloudy; a few drops of rain fell on the night of the 4th instant. Nights still cool, but it is rather hot during the day. Harvesting of linseed, oats, and peas continues. Wheat also is being cut with prospect of an average outturn.															
	35 Purneah .. 8, '90	0-06	Weather—dry with westerly wind. Lands being ploughed for <i>bandai</i> cultivation. Wheat, gram, and other standing crops doing well. Common rice selling at 20 seers per rupee in Sudder station and 21 seers at Arruah.															
	36 Maldah .. 8, '90	0-15	Weather—warm and fine. High west wind and occasional clouds. <i>Rabbi</i> crops ripening. <i>Boro</i> transplantation continues. Rain during the week has done some injury to mango blossoms. Common rice selling at an average of 12 seers a rupee.															
	Shibganje ..	0-26																
	37 Sonthal Pergba .. 8, '90	0-16	Slight rain with thunder on 4th and 5th instant. Rain not sufficient to do much good. It will help sugarcane, mango, and <i>mohoa</i> . <i>Chickna</i> ratur gives 6 to 8 annas in Goida. Prospects on the whole fair.															
	Doughar ..	0-27																
	Goida ..	0-30																
	Jamtara ..	0-51																
	Pakour ..	0-15																

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
ORISSA DIV.	36 Cuttack March 8, '90	Nil	Weather—seasonable. <i>Dalua</i> rice and tobacco doing well. Prospects of crops continue good.
	39 Pooree .. 7, '90	Nil	Weather—hot and cloudy. Threshing of <i>sarad</i> rice still continues. Lands being ploughed. <i>Dalua</i> and <i>moong</i> doing well. Prices of rice stationary.
	40 Balasore .. 8, '90	Nil	Weather—seasonable. <i>Rubbi</i> , sugarcane, and mustard being harvested. A fall of rain would be beneficial.
CHOTA NAAGPORE.			
South-West Frontier Agency			
CHOTA NAAGPORE DIV.	41 Hazaribagh March 8, '90	0.20	Weather—unsettled, cloudy and cool. <i>Rubbi</i> being harvested with good results. Sugarcane being transplanted. Poppy prospects continue favourable.
	42 Lohardugga .. 6, '90	1.24	Weather—cloudy with rain and wind. Prospects of <i>rubbi</i> crops good in the head-quarters subdivision. Mango and <i>mohua</i> blossoms much damaged by storm and lightning. <i>Rubbi</i> harvesting not yet finished in the Palamow subdivision.
	43 Singhbhum .. 6, '90	0.10	Weather—cloudy. Prospects of crops continue good. Prices stationary.
	44 Manbhum .. 8, '90	0.38	Weather—hot and cloudy. Slight rain that fell during the week has done some good to the plantation of sugarcane. Coarse rice selling at 20 to 24 seers per rupee.
	Govindpore ..	0.53	

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 11th March 1890.P. NOLAN,
Secy. to the Govt. of Bengal.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the

Number.		DISTRICTS.	QUANTITIES PER RUPEE IN																											
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR OHOLU. (Sorghum Vulgare.)															
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.													
BENGAL.																														
Western Districts.																														
1	Bardwan	14	8	14	8	13	4					14	4	14	4	15	0	16	11	17	1	18	0							
2	Bankoora	15	0	14	8	12	8	16	0	14	0	15	0	18	0	17	8	17	8	20	0	21	4	20	0					
3	Beerbhoom	16	0	15	0	11	8					13	8	13	8	13	4	18	0	16	8	16	8							
4	Midnapore	13	0	13	0	10	0					15	0	14	0	15	0	20	0	18	0	20	0							
5	Hooghly	13	0	13	0	13	0					8	0	8	0	10	0	14	0	13	0	13	0							
	Howrah											11	8	11	8	12	0	14	8	14	8	16	0							
Central Districts.																														
	Calcutta	13	10	13	9	12	15	17	1	17	2	15	15	9	3	9	1	9	9	14	1	13	14	9	21	5	21	0	16	11
6	24-Pergunnahs	14	8	14		12	4	16	0	16	0	16	0	8	0	8	0	8	0	16	0	17	0	16	8					
7	Nuddea	15	0	15	0	14	0	17	12	17	12	17	12	12	5	10	10	13	5	4	9	12	14	16	4					
8	Khoolna													14	0	14	0	14	0	16	0	16	0	16	0					
9	Jessore	12	12	12	12	12	8							9	0	9	0	13	0	16	0	16	0	16	0					
10	Moorshedabad	16	0	16	0	13	5							13	0	15	8	13	8	17	0	16	0	17	0					
11	Dinapore	19	4	17	0	12	0			20	0	11	0	15	0	15	8	15	8	19	0	19	9	19	8					
12	Rajshahye	16	8	16	8	13	8	26	4	22	8	25	4	13	8	15	0	14	4	15	0	16	2	16	8					
13	Rungpore	14	8	13	6	14	8							9	7	9	6	10	8	14	8	14	8	16	0					
14	Bogra	Best. 12 0 12 0 Common 16 8 15 0		12 0										12	0	12	0	15	0	18	0	19	2	19	8					
15	Pubna	17	4	15	0	15	12							6	14	6	12	7	8	16	4	16	14	13	0					
16	Darjeeling	10	0	10	0	10	0	9	0	9	0	9	0	5	0	5	0	6	0	12	0	12	0	13	0					
17	Julpigoree	14	0	13	0	10	0	16	0	16	0	16	0	8	0	8	0	8	0	15	0	18	0	17	8					
Eastern Districts.																														
18	Dacca	13	0	13	0	15	8	16	0	16	0	20	0	13	0	14	0	15	0	14	0	16	0	17	0					
19	Furzedpore	12	0	12	0	16	0	14	0	14	0	20	0	10	0	10	0	9	0	4	0	14	0	16	0					
20	Backergunge													12	4	12	13	14	0	13	12	15	0	16	8					
21	Mymensingh	11	8	10	0	10	0							10	8	8	0	12	0	14	0	14	0	18	0					

A In subdivisions retail prices of salt per rupee are:—Gyina 10 seers, Cutwa 10 seers 6 chittacks, and Manesungur 10½ seers.

B At Ranpore limit retail price of salt 10 seers per rupee.

C In subdivisions retail prices of salt per rupee are:—Contal 9 seers, Tumlook 8 seers, and Ghattal 10 seers.

D In subdivisions retail prices of salt per rupee are:—Berampore 10 seers and Jehanabad 10 seers.

E In subdivisions retail prices of salt per rupee are:—Barrackpore 9 seers 2 chittacks, and Dum-Dum 10 seers.

F In subdivisions retail prices of salt per rupee are:—Koushtea 10 seers, Meherpore 10½ seers, Choudanga 9 seers, and

G At Bhatnagar limit price of salt 10 seers per rupee.

H In subdivisions retail prices of salt per rupee are:—Jhenidia 9 seers, Magura 9½ seers, Narail 9½ seers, and Bongong 10 seers.

I In subdivisions retail prices of salt per rupee are:—Lalbagh 10½ seers, Jangipore 10 seers, and Kaudi 10½ seers.

BAJRA OR CUMBU. (<i>Pennisetum typho- ideum.</i>)	MANUA OR RAGI. (<i>Eleusine Corocana.</i>)
--	---

Present return.	Next preceding return.	Corresponding return of last year.
Present return.	Next preceding return.	Corresponding return of last year.

[illegible][illegible]

0	000	000	000	000
1	001	001	001	001
2	002	002	002	002
3	003	003	003	003
4	004	004	004	004
5	005	005	005	005
6	006	006	006	006
7	007	007	007	007
8	008	008	008	008
9	009	009	009	009

KANGNI OR KARUN, ITALIAN MILLET. (<i>Sesaria italica</i> .)			GRAM, CHANA, CHHOLA, KADALAI OR SUNAGA. (<i>Cicer arietinum</i> .)		
Present return.	Next preceding turn.	Corresponding turn of last year.	Present return.	Next preceding turn.	Corresponding turn of last year.

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...	10 0	10 0	15 0	...	...	...
...	17 8	17 8	14 8	...	...	...
...	18 0	17 4	15 0	...	...	...
...	16 0	16 0	13 8	...	...	...
...	16 0	16 0	13 6	...	...	...
...	16 8	16 12	13 0	...	...	...

11 0	11 14	17 12	16 12	16 12	15 12	...	...	...	...
6 8	0 8	10 0	18 13	19 8	17 1	...	...	...	...
...	...	...	20 0	20 0	17 0	...	...	...	...
...	...	...	13 0	13 0	10 8	...	...	...	...
...	...	...	16 0	16 0	14 0	...	...	...	...
...	...	...	22 0	20 0	16 0	...	...	...	...
...	...	...	15 0	15 8	13 0	...	...	...	...
...	...	...	10 8	18 0	15 0	...	...	...	...
...	...	...	16 0	14 8	10 0	...	...	...	...
...	...	...	12 0	12 12	13 14	...	...	...	...
...	...	...	17 4	16 0	17 8	...	...	...	...
...	...	...	10 0	10 0	11 0	...	...	...	...
...	...	...	13 0	13 0	11 8	...	...	...	...

...	...	...	13 0	13 0	13 0	...	...	...	...
...	...	...	11 0	11 0	10 0	...	...	...	...
...	...	...	10 0	16 0	12 8	...	...	...	...
...	...	...	14 8	13 0	12 8	...	...	...	...

Head-quarter Station Bazars of the Districts of Bengal on the 28th February 1890.

															WHOLESALE PRICES PER MAUND OF 40 SEERS.						DISTRICTS.													
INDIAN-CORN OR MAIZE (Zea Mays.)			ARHAR OR TUR, CAJAN PEA. (Cajanus indicus.)			FIREWOOD.			SALT.			SALT.																						
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.																	
S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.											
...	23	0	18	0	18	8	00	0	100	0	07	10	0	10	0	10	2	3	10	6	3	11	0	3	11	6	Burdwan.					
35	0	29	0	20	0	20	0	18	8	280	0	28	0	28	0	10	0	10	0	10	0	3	15	0	3	15	0	3	14	0	Bankoora.			
...	12	0	12	0	...	160	0	160	0	160	0	10	8	10	8	10	0	3	10	0	3	10	6	3	13	0	Boerghoom.					
...	13	8	13	8	21	0	160	0	160	0	160	0	10	8	10	8	10	4	3	14	6	3	15	0	3	14	0	Midnapore.				
...	11	0	11	0	12	0	120	0	120	0	120	0	9	0	9	0	9	0	3	11	6	3	11	6	4	6	0	Hooghly.				
...	13	4	13	8	13	4	100	0	100	0	100	0	10	0	10	0	10	8	3	12	6	3	13	0	3	7	0	Howrah.				
																							BENGAL.											
																							Western Districts.											
																							Central Districts.											
18	12	18	12	16	0	17	6	17	11	16	12	100	0	100	0	10	2	10	2	10	5	3	10	2	3	11	0	3	9	6	Calcutta.			
...	15	0	17	0	15	0	100	0	100	0	100	0	10	0	10	0	10	4	3	9	6	3	9	6	3	10	0	24-Pergunnahs.			
...	20	0	20	0	17	2	...	...	...	...	...	...	9	2	9	2	9	2	4	0	0	3	14	0	3	14	0	Nuddes.				
...	160	0	160	0	160	0	160	0	9	8	9	8	9	2	4	4	0	4	4	0	4	4	0	4	0	0	Khoolna.		
...	16	0	15	0	22	0	160	0	160	0	160	0	9	4	9	2	9	2	4	0	0	4	0	0	4	0	0	4	0	0	Jessore.	
...	19	0	19	0	22	0	200	0	200	0	200	0	10	12	10	12	10	12	3	12	0	3	12	0	4	0	0	4	0	0	Moorshedabad.	
...	13	0	10	0	9	8	160	0	160	0	160	0	9	8	9	8	10	0	4	0	0	4	0	0	3	15	0	Dinagore.				
...	20	0	18	0	21	12	240	0	240	0	240	0	9	0	9	0	9	9	4	2	8	4	2	8	4	0	0	4	0	0	Rajshahye.	
...	9	7	9	6	13	0	100	0	100	0	120	0	8	14	8	14	9	6	4	8	0	4	8	0	4	4	0	4	4	0	Rungpore.	
...	90	0	90	0	96	0	9	0	9	0	9	0	9	0	9	0	4	4	0	4	4	0	4	4	0	4	5	4	Bogra.
...	20	10	20	10	24	0	200	0	200	0	200	0	9	6	8	11	9	2	4	0	0	4	0	0	4	0	0	4	0	0	Pubna.	
16	0	16	0	18	0	8	0	8	0	...	120	0	120	0	12	0	8	0	8	0	8	0	5	0	0	5	0	0	5	0	0	0	Darjeeling.	
...	12	0	12	0	9	0	120	0	120	0	120	0	9	0	9	0	9	0	4	2	0	4	2	0	4	2	0	4	2	0	Jalpigore.	
																							Eastern Districts.											
...	14	0	14	0	16	0	160	0	160	0	160	0	9	8	9	8	10	0	4	2	0	4	2	0	3	14	0	3	14	0	Dacca.	
12	0	14	0	20	0	10	0	11	0	120	0	120	0	120	0	9	0	9	0	10	0	4	4	0	4	4	0	3	14	0	3	14	0	Furzedpore.
...	120	0	120	0	120	0	10	5	10	5	10	10	3	14	0	3	14	0	3	14	0	3	12	0	3	12	0	Backergunge.	
...	14	0	15	0	...	...	...	...	...	9	0	9	0	9	8	4	4	0	4	4	0	4	4	0	4	4	0	4	4	0	Mymensingh.	

J In Thakurgaon subdivision retail price of salt 8 seers per rupee.

K In subdivisions retail prices of salt per rupee are:—Nattoro 11 seers and Nowgong 8 seers 11 chittacks.

L In subdivisions retail prices of salt per rupee are:—Kurigram 9 seers, Nilphamari 9 seers, and Gaibandha 8 seers.

M At Barisal retail price of salt 10 seers per rupee.

N At Sylhet wholesale price of salt Rs. 4-4 per maund.

O At Calcutta in the Alipore subdivision retail price of salt 8 seers per rupee.

P In subdivisions retail prices of salt per rupee are:—Maulabergunge 8 seers, Moonsheegunge 8½ seers, and Naraingunge 10 seers 10 chittacks.

Q In subdivisions retail prices of salt per rupee are:—Patuakhali 9 seers, Perospore 9 seers, and Rhola 8 seers.

R In subdivisions retail prices of salt per rupee are:—Kishoregunge 8 seers, Tangail 10 seers, Netrokona 8 seers, and Shoretore 8 seers.

PRICES-CURRENT (retail) of Food-grains, Firewood and Salt in the Head-quarter

Number.		DISTRICTS.		QUANTITIES PER RUPEE IN																	
				WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLAM. (Sorghum Vulgare.)					
				Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.			
Eastern Districts—concluded.																					
22	Chittagong	11 0	11 0	11 0	...	...	...	12 0	12 0	12 0	15 10	15 10	14 0	...	...	...	...	...	...
23	Noakholly	...	...	...	...	...	...	14 0	15 0	15 0	16 0	17 0	16 0	...	...	...	...	...	...
24	Tipperah	12 5	12 5	12 8	...	...	...	Gobindabhab. 10 0	10 0	10 0	16 0	14 0	14 0	18 0	...	...	...	...	...
25	Chittagong Hill Tracts. Hill Tipperah	...	...	...	...	...	...	11 7	12 4	11 6	13 5	14 0	13 6	...	...	...	...	...	...
		6 0	6 0	6 0	...	...	...	9 0	0 0	9 0	15 0	15 0	18 0	...	...	...	...	...	...
BEHAR.																					
26	Patna	17 8	17 8	17 8	...	...	...	25 0	23 0	22 8	10 8	10 8	11 0	16 8	18 12	15 2	22 0	21 0	25 0
27	Gya	15 8	15 8	15 0	...	...	...	22 0	23 0	18 0	11 0	10 8	10 0	17 0	17 0	16 0	...	...	...
28	Shahabad	15 0	16 0	16 0	18 0	24 0	20 0	3 0	9 0	9 0	16 0	17 0	15 0	21 0	20 0	20 0	...	...	...
29	Durbhunga	14 4	14 4	16 8	22 0	27 8	16 12	11 0	11 0	10 0	18 11	18 2	15 8	27 6	...	...	...	...	...
30	Monruffpore	15 0	14 0	12 0	20 0	20 0	...	9 0	9 0	9 0	17 0	17 0	12 8	...	...	...	...	...	...
31	Sarun	15 0	15 8	15 0	...	...	...	21 12	9 4	9 0	8 12	16 13	17 0	14 10	...	...	...	...	...
32	Chumparun	14 0	12 0	13 0	28 0	24 0	16 0	8 0	8 0	7 0	18 0	18 0	13 0	...	...	...	...	...	...
33	Monghyr	18 6	17 14	15 12	18 5	21 0	...	15 12	16 12	13 2	17 5	18 14	16 8	...	...	...	...	...	...
34	Bhagulpore	16 6	16 6	15 2	20 9	20 8	17 0	11 6	11 6	13 14	13 14	13 14	15 2	...	...	...	...	...	...
35	Purneah	18 0	18 0	12 0	...	...	...	18 0	17 0	15 0	19 0	19 0	18 0	...	...	...	...	...	...
36	Maldah	18 0	18 0	18 0	...	...	...	14 0	11 0	10 0	17 0	18 0	17 0	...	...	...	...	...	...
37	Sonthal Perghs.	13 0	13 0	11 0	...	...	...	13 0	13 0	14 0	17 0	17 0	17 0	...	...	...	...	...	...
ORISSA.																					
38	Cuttack	13 2	13 2	13 2	...	...	...	10 8	10 8	11 13	21 0	21 0	17 1	...	...	...	...	...	...
39	Pooree	13 2	13 2	11 13	...	...	...	17 1	17 1	11 13	23 10	23 10	17 1	...	...	...	...	...	...
40	Balasore	15 0	15 0	13 0	13 0	13 0	13 0	13 0	13 0	12 0	21 0	19 0	21 0	...	...	...	...	...	...
CHOTA NAGPORE.																					
South-West Frontier Agency.																					
41	Hazaribagh	13 0	13 0	13 0	14 0	16 0	...	10 0	10 0	8 0	17 0	17 0	16 0	...	...	...	...	...	...
42	Lohardugga	13 8	13 8	13 0	...	...	...	15 0	15 0	13 0	17 12	18 0	14 8	...	...	...	...	...	...
43	Singbhoom	10 12	10 8	13 0	10 0	12 0	14 0	16 0	16 0	16 0	20 0	20 0	20 0	...	...	...	...	...	...
44	Manbhoom	13 5	13 5	14 0	...	...	...	14 0	15 0	15 0	22 0	21 0	22 0	...	...	...	...	...	...

h At Cox's Bazar retail price of salt 8 seers per rupee.

t At Fenny Hat retail price of salt 8 seers per rupee.

v In subdivisions retail price of salt per rupee are:—Buxar 10 seers, Raseeram 10 seers, and Bhabuah 9 seers.

w In subdivisions retail price of salt per rupee are:—Tajpore 11 seers and Madhubani 10 seers.

W At Hajipore retail price of salt 10 seers per rupee.

x At Bettiah retail price of salt 9 seers per rupee.

CALCUTTA,
The 11th March 1890.

SEEDS OF 80 TOLAHS.

BAJRA OR CUMBU. (<i>Pennisetum typho-</i> <i>ideum</i> .)			MARUA OR RAGI. (<i>Echinochloa crusgalli</i> .)		
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding re- turn of last year.

Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.
...
...
...
...
...

11	0	...	...	27	0	27	0	...	...
...
...
...
...	...	...	...	23	7	23	7	18	12
...
...
...	...	...	...	22	0	22	0	20	0
...	...	...	...	28	0	...	...	20	0
...
...
...
...
...
...
...

...
...
...

...	...	23	0	23	0	21	0
...	...	34	0	40	8	24	0
...
...

KANONI OR KAKUN,
ITALIAN MIDGE.
(*Satura italica*.)

GHAM, CHANA,
CHIDDA, KADALAY
OR SUNAGA.
(*Glar aristatum*.)

Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding re- turn of last year.
-----------------	-----------------------------	---	-----------------	-----------------------------	---

S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.
...	13	0	13	0	11	...
...	12	0	12	0	12	...
...	13	5	13	5	16	...
...
...	12	0	12	0	10	...

23	0	22	0	16	0	25	0	24	0	19	...
15	0	15	0	13	4	20	0	20	0	18	...
...	...	...	...	...	...	20	0	20	0	20	...
...	...	...	...	...	...	22	0	22	8	19	11
...	...	...	...	...	...	18	0	18	0	16	...
16	0	16	0	12	0	20	0	20	4	19	...
...	...	...	...	...	...	17	0	23	0	16	0
...	16	12	...	...	...	27	13	21	0	18	8
...	...	...	...	...	...	20	3	20	3	17	0
...	...	...	...	...	...	16	0	16	0	13	...
...	...	...	...	...	...	16	0	16	0	15	...
...	...	...	...	...	...	17	0	17	0	14	...

...	...	...	...	14	7	14	7	21	...
...	...	...	...	15	12	17	1	15	1
...	...	...	...	14	0	14	0	13	...

...	...	...	...	16	0	16	0	15	...
...	...	...	...	14	0	12	8	12	...
...	...	...	...	10	0	10	0	12	...
...	...	...	...	16	0	16	0	14	...

Station Basars of the Districts of Bengal on the 28th February 1890—(concluded).

															WHOLESALE PRICES PER MAUND OF 40 SEERS.						DISTRICTS.
INDIAN-CORN OR MAIZE. (Zea Mays.)			ARBE OR THUL. CADJAN PRA. (Cajanus indicus.)			FIREWOOD.			SALT.			SALT.									
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.							
															Eastern Districts—concluded.						
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	Rs. A. P.	Rs. A. P.	Rs. A. P.							
...	...	...	...	...	...	110 0	110 0	108 0	9 0	9 0	9 8	4 4	4 0	4 0	Chittagong.	
...	...	...	8 0	8 0	8 0	...	...	...	9 0	9 0	8 0	4 0	4 0	4 8	Noakholly.	
...	...	...	8 6	8 6	9 0	...	...	...	9 6	8 14	8 0	4 4	4 8	4 6	Tipperah.	
...	...	...	...	...	...	320 0	320 0	320 0	8 0	8 0	8 0	4 8	4 8	4 8	Chittagong Hill Tracts.	
...	...	...	8 0	8 0	8 0	...	...	...	8 0	8 0	8 0	6 6	4 6	4 6	Hill Tipperah.	
															BEHAR.						
25 0	23 0	22 8	25 0	21 8	23 0	130 0	130 0	130 0	10 0	10 0	10 0	3 14	3 13	3 12	Patna.						
...	...	...	21 0	20 0	19 0	160 0	160 0	300 0	9 2	9 2	8 12	4 2	4 2	4 2	Gya.				
...	...	...	20 0	19 0	14 0	160 0	160 0	160 0	10 0	10 0	10 0	3 15	3 15	4 0	Shahabad.				
23 1	23 0	17 8	17 9	17 9	21 0	160 0	300 0	176 0	11 0	10 4	11 0	3 10	3 14	3 10	Darbhunga.						
23 0	26 0	18 0	18 0	18 0	20 0	160 0	160 0	160 0	10 0	10 0	10 0	4 0	4 0	3 12	Muzafferpore						
22 0	23 0	21 2	19 8	19 8	21 0	160 0	160 0	200 0	9 12	10 0	10 0	4 0	4 0	3 15	Sarun.						
24 8	24 0	18 0	17 0	17 0	22 0	160 0	160 0	160 0	9 8	10 0	9 5	4 2	4 1	4 0	Chumpan.						
24 2	21 0	16 4	18 5	16 12	17 4	147 0	147 0	147 0	9 15	9 11	9 8	4 0	4 0	4 0	Monghyr.						
22 11	22 6	18 6	16 6	16 6	17 10	176 12	176 12	176 8	10 1	10 1	10 1	3 15	3 15	6 4	Bhagalpore.						
...	...	...	16 0	16 0	16 0	130 0	130 0	200 0	9 0	9 0	9 0	4 7	4 7	4 5	Purnea.				
...	...	...	...	...	...	160 0	120 0	120 0	9 0	9 0	10 0	4 1	4 2	4 0	Malih.	
25 0	25 0	19 0	20 0	20 0	22 0	200 0	200 0	200 0	9 0	9 0	9 0	4 0	4 0	4 3	South Patna.						
															ORISSA.						
...	...	...	14 7	14 7	18 6	80 0	80 0	80 0	11 0	11 0	12 0	3 12	3 12	3 3	Cuttack.				
...	...	...	16 12	15 12	14 7	80 0	80 0	80 0	11 13	11 13	11 13	3 6	3 6	3 6	Poor.				
...	...	...	...	...	...	160 0	160 0	160 0	10 0	10 0	9 0	3 14	3 14	4 1	Balasore.	
															CHOTA NAGPORE						
															South-West Frontier Agency						
21 0	21 0	18 0	18 0	16 0	17 0	320 0	320 0	320 0	8 0	8 0	8 0	4 6	4 6	4 5	Hazaribagh.						
...	32 0	17 0	19 0	19 12	16 0	120 0	130 0	140 0	8 8	8 8	8 8	4 5	4 6	4 8	Lohardugga.						
...	20 0	...	14 0	13 0	15 0	240 0	340 0	300 0	8 8	8 8	8 0	4 12	4 12	5 0	Singhoom.						
...	32 0	26 8	20 0	20 0	17 0	...	300 0	200 0	9 2	9 2	9 0	4 0	4 2	4 2	Manbhoom.						

Y In subdivisions retail prices of salt per rupee are:—Begusarai 9½ seers and Jamui 9 seers.
 Z At Kishengunge retail price of salt 8 seers per rupee.
 Z1 In Khoordah subdivision retail price of salt 11 seers per rupee.
 Z2 At Bhuduck retail price of salt 9 seers per rupee.
 Z3 At Palamow retail price of salt 8½ seers per rupee.
 Z4 At Govindpore retail price of salt 9 seers per rupee.

Published for general information.

P. NOLAN,
 Secy. to the Govt. of Bengal.

PRICES-CURRENT (wholesale) of Food-grains, Firewood, and Sugar

Number.	MARKS.	WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
1	Calcutta ...	2 11 0	2 10 11	2 13 5	2 1 10	2 1 8	2 5 8	4 1 3	4 2 7	3 14 10	2 9 2	2 10 3	2 7 10
2	Beraingunge ...	2 4 0	2 2 0	2 5 0	—	—	—	3 12 0	4 10 0	3 9 0	2 12 0	2 12 0	2 5 4
3	Decca ...	3 0 0	3 0 0	2 8 0	2 7 0	2 7 0	1 8 0	3 0 0	2 13 0	2 10 0	2 13 0	2 7 0	2 5 4
4	Naraingunge ...	—	—	—	—	—	—	3 0 0	2 12 0	2 6 0	2 12 0	2 8 0	2 4 4
5	Chittagong ...	3 8 0	3 8 0	3 9 0	—	—	—	3 4 0	3 4 0	3 4 0	2 8 6	2 8 6	2 10 0
6	Patna ...	2 4 0	2 4 0	—	1 9 0	1 10 6	1 12 0	3 12 0	3 12 0	3 8 0	2 0 0	2 1 0	2 6 4
		2 8 0	2 8 0	2 5 0									
7	Balasore ...	2 8 0	2 8 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 4 0	1 11 0	2 0 0	1 11 0
8	Poorbe ...	—	—	—	—	—	—	—	—	—	1 12 0	1 12 0	2 2 4
9	Cuttack ...	3 0 0	3 0 0	3 0 0	—	—	—	3 10 0	3 10 0	3 4 0	1 11 0	1 11 0	2 0 4

CALCUTTA,
The 11th March, 1890.

PRICES PER MAUND

[illegible]

OF 40 SEEDS

MARUA OR RAOL. (<i>Elaeagnus Corocana</i> .)			KANGNI OR KAP ITALIAN MIELI (<i>Sesuvia italica</i> .)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
...	3 0 0	2 12 62	...
...
...
...
...
...
1 7 0	1 7 0	..	1 10 0	1 12 42	...
...
...
...

in the undermentioned *Marts* of Bengal on the 28th February 1890.

GRAM, CHANA, CHHOLA, KADALAY OR SUNAGA. (<i>Cicer Arietinum</i> .)			INDIAN-CORN OR MAHER. (<i>Zea Mays</i> .)			ARHAR OR THUR. CADJAN PEA. (<i>Cajanus indicus</i> .)			FILEWOOD.			SALT.			MARTS.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.	
2 2 4	2 2 4	2 5 3	1 14 6	1 14 6	2 4 0	2 1 2	1 15 11	2 2 5	0 5 6	0 5 6	0 5 9	3 10 2	3 11 0	3 9 6	Calcutta.
2 0	2 4 0	3 10	...	...	...	...	...	...	...	...	...	3 12 0	3 12 0	3 13 0	Serajgunge.
0 0	3 0 0	3 0 0	...	...	...	2 12 0	2 12 0	2 8 0	0 4 0	0 4 0	0 5 0	4 2 0	4 2 0	3 14 0	Dacca.
0 0	3 0 0	3 0 0	...	...	...	3 2 0	3 2 0	3 2 0	0 8 0	0 8 0	0 10 0	3 8 0	3 12 0	3 12 0	Naraingunge.
0 0	3 0 0	3 8 0	...	...	...	...	...	...	0 6 0	0 6 0	0 5 0	4 4 0	4 4 0	4 0 0	Chittagong.
8 0	1 9 6	2 0 0	1 9 0	1 10 6	1 11 9	1 9 0	1 13 6	1 10 0	0 5 0	0 5 0	0 5 0	3 14 0	3 13 6	3 12 2	Patna.
2 0	2 12 0	2 14 0	...	...	...	...	...	...	0 4 6	0 4 6	0 4 6	3 14 0	3 14 0	4 1 0	Belasore.
-	...	...	...	...	...	...	...	...	...	...	...	3 6 0	3 6 0	3 6 0	Pooree.
2 0	2 12 0	1 11 0	...	...	...	2 12 0	2 12 0	2 0 0	0 8 0	0 8 0	0 8 0	3 12 0	3 13 0	3 3 0	Cuttack.

Published for general information.

P. NOLAN,
Secy. to the Govt. of Bengal.

STATEMENT SHOWING THE STOCKS OF RICE IN AND AROUND CALCUTTA.

STOCK IN HAND AS COMPILED ON—													
NAMES OF WARE.	1st week of Mar. 1889.	1st week of April 1889.	1st week of May 1889.	1st week of June 1889.	1st week of July 1889.	1st week of August 1889.	1st week of Sept. 1889.	2nd week of Oct. 1889.	1st week of Nov. 1889.	1st week of Dec. 1889.	1st week of Jan. 1890.	1st week of Feb. 1890.	1st week of Mar. 1890.
Balachetta	12,77,000	12,07,000	11,42,000	7,37,500	8,75,000	7,32,700	6,42,000	5,09,000	4,54,000	2,90,500	2,00,000	5,45,000	2,21,000
Ootladanga	40,250	37,100	52,400	85,000	90,000	75,700	75,400	71,000	67,400	55,000	62,400	55,000	1,00,000
Chitnore, Golabare, Cumer- tooty, Halkhola, and Gully Ghat.	7,03,500	7,04,000	7,54,400	6,10,200	6,43,000	6,17,700	6,70,900	6,74,100	6,33,300	5,16,000	6,00,000	5,00,000	2,03,000
Pithurbhatta, Poda, and Jorabari.	2,000	2,000	3,000	2,000	2,000	3,000	4,000	5,000	8,000	2,000	4,000	5,000	4,000
Taligumra, Chitab Kidderpore and Meoshurung.	1,37,400	1,45,100	1,00,000	1,10,700	1,00,700	1,10,700	71,500	64,200	63,900	66,100	83,750	59,100	1,51,000
21 Minor Bazaar (estimated) ..	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops, 2,129 in number (estimated).	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000	2,80,000
Seidrubally, Nowabgunge, Shudrampur, and Chander- market.	20,400	19,700	20,000	19,000	19,000	19,117	14,200	14,300	13,610	14,000	20,000	19,000	30,000
Total	27,13,300	27,79,100	27,50,400	21,50,000	22,00,200	21,50,017	18,90,000	18,25,000	17,51,310	15,13,000	15,00,000	18,63,000	22,00,000
On Railway premises on both sides of the river.	8,550	33,414	12,400	6,578	7,730	4,170	9,000	8,500	14,011	6,077	20,000	20,500	47,000
(By Pors Com- missioners' re- sponse ..)	31,500	31,400	17,000	15,000	25,010	17,500	25,500	17,500	21,500	17,500	20,000	20,500	47,000
On boats un- loaded ..	30,000	30,715	30,715	15,000	27,100	29,500	19,000	45,000	14,718	14,718	13,413	2,40,000	1,24,500
(By annual returns ..)	30,000	30,715	30,715	15,000	27,100	29,500	19,000	45,000	14,718	14,718	13,413	2,40,000	1,24,500
Grand total of stocks	25,34,000	28,42,700	27,90,500	22,22,000	22,50,300	22,50,600	19,44,500	18,17,000	17,61,000	15,40,500	17,00,000	21,21,000	23,90,000
Probable stock available for exportation by sea.	17½ lakhs	16 lakhs	17½ lakhs	11½ lakhs	12½ lakhs	12½ lakhs	9 lakhs	8½ lakhs	7½ lakhs	6 lakhs	7½ lakhs	11½ lakhs	14½ lakhs

P. NOLAN,
Secy. to the Govt. of Bengal.

STATISTICAL DEPARTMENT,
The 10th March, 1890.

Abstract of the results of Meteorological Observations taken at the Alipore Observatory in the month of February 1890.

	Inches.	Date.	Hour.
The mean pressure of the month	29.948		
The average pressure of February from 24 years' registers ...	29.945		
The highest pressure in the month	30.170	2nd	10
The lowest pressure in the month	29.676	16th	16
The range of pressure	0.494		
Hours.			
The total number of hours of bright sunshine during the month	244.2		
The maximum possible number of hours of sunshine ...	318.0		
°			
The mean temperature of the month	70.9		
The average temperature of February from 24 years' registers	73.0		
The highest temperature in the month	90.8	26th.	
The lowest temperature in the month	50.7	12th.	
The range of temperature during the month	40.1		
The mean daily range of temperature	24.0		
The greatest range of temperature in one day	30.4	12th.	
Per cent.			
The mean humidity of the month	67		
The average humidity of February from 24 years' registers ...	67		
Inches.			
The mean vapour tension of the month	0.493		
The average vapour tension of February from 9 years' registers	0.538		
The mean cloud proportion of the month	0.74		
The average cloud proportion of February from 13 years' registers	1.75		
Inches.			
The total rainfall of the month	Nil		
The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)	Nil		
The average fall of February from 48 years' registers ...	0.87		
The greatest fall in 24 hours	Nil		
Days.			
The number of rainy days in the month	Nil		
The average number of rainy days in February from 24 years' registers	3		
°			
The mean maximum equilibrium temperature of solar radiation during the month	137.3		
The mean difference of sun and air temperatures	53.7		
The greatest sun temperature	143.4	21st.	
The greatest excess of sun over air temperature	56.7	8th.	
The mean temperature of the nocturnal radiation thermometer on woollen cloth	51.8		
The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground	8.1		
The greatest depression of the nocturnal radiation thermometer below the minimum air temperature	10.8	12th.	
Miles.			
The mean movement of the wind per day	69.8		
The greatest movement of the wind in one day	183.0	17th.	
The greatest movement of the wind in one hour	17.0	26th 11 to noon.	
The number of hours with winds from each of the 8 points—			
N. 128, N.E. 48, E. 14, S.E. 21, S. 69, S.W. 160, W. 100, N.W. 75, Calm 57.			

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park Street Observatory). The barometer is about 8 feet higher at Alipore, and, other things being equal, reads therefore .008 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 2.1° lower; and finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

C. LITTLE,

METEOROLOGICAL OFFICE, INDIA;
Calcutta, the 7th March 1890.

For Meteorological Reporter to the Govt. of India.

Meteorological Report of the Province of

METEOROLOGICAL DIVISION.	DISTRICT.	Representative stations.	STATION OBSERVATIONS.														
			AIR PRESSURE.					TEMPERATURE.					HUMIDITY.		CLOUD.		
			Highest 8 A.M. barometer reading of month.	Lowest 8 A.M. barometer reading of month.	Mean 8 A.M. for month.	Mean reduced to sea-level.	Variation from normal mean.	Highest of month.	Lowest of month.	Mean daily maximum temperature.	Mean daily minimum temperature.	Mean daily temperature.	Variation from normal mean.	Mean 8 A.M. humidity.	Variation from normal mean.	Mean cloud amount, 8 A.M.	Variation from normal mean, 8 A.M.
Orissa.	Pooree	Pooree Gopalpore Pala Point	30.130 30.130 30.140	29.774 29.780 29.782	29.904 29.885 29.891	30.067 30.067 30.014	— +0.05 —0.03	30.02 29.99 30.03	29.77 29.70 29.71	33.7 32.0 33.1	29.3 28.5 29.5	31.5 30.2 31.3	— —0.5 —0.8	85 72 91	— —1 —1	1.0 0.5 2.6	— —0.8 —0.8
	Cuttack	Cuttack	30.080	29.720	29.840	30.024	—0.04	30.4	29.0	31.1	29.3	30.2	+0.4	78	—2	2.9	+1.0
	Balasore	Balasore	30.165	29.713	29.938	30.020	—0.10	30.4	28.4	30.0	28.5	29.3	+1.1	78	—	0.1	—
	South-West Midnapore and South 24-Pergunnahs	Saugor Island	30.150	29.778	29.893	30.020	—0.10	30.2	28.3	31.4	29.1	30.3	+0.1	91	—1	1.3	—1.2
South-West Bengal.	Midnapore	Midnapore	30.009	29.627	29.807	30.023	—0.20	30.3	29.2	30.7	29.0	29.7	+2.5	61	—	0.3	—
	24-Pergunnahs, Howrah, and Hooghly.	Calcutta	30.140	29.750	29.900	30.018	—0.18	31.0	29.8	32.2	29.5	30.4	+0.5	83	—1	0.8	—1.4
	Burdwan	Burdwan	30.044	29.657	29.850	30.014	—0.20	30.8	29.3	30.4	27.1	28.9	+1.0	62	—10	0.8	—1.1
	Bankura	Bankura	29.821	29.447	29.630	30.000	—0.20	30.1	28.3	30.0	28.1	29.1	+1.7	58	—	0.6	—
Bihar.	West Burdwan and Boerhoom.	Rangpur	29.824	29.423	29.657	30.033	—0.10	30.5	28.2	30.0	27.6	29.2	+1.8	67	—	0.5	—
	Mooreabad	Berhampore	30.080	29.690	29.841	30.012	—0.15	31.1	29.6	32.0	29.2	30.6	+0.6	70	+1	0.6	—1.3
	Nuddea	Krishnagore	30.113	29.802	29.950	30.044	+0.10	32.7	30.0	33.4	30.2	32.0	+0.8	69	—	0.5	—
	Jessore and Khoosia	Jessore	30.134	29.721	29.977	30.012	—0.10	31.8	29.9	32.7	29.9	31.4	+1.4	80	+7	0.1	—2.2
North Bengal.	Chittagong	Chittagong	30.033	29.771	29.923	30.017	—0.21	30.1	28.5	30.0	28.4	29.2	+1.5	62	—5	1.6	—0.6
	Chittagong Hill Tracts	Dumaguri	Observations not received.														
	Backergunge	Havrial	30.118	29.754	29.930	30.020	—0.03	30.3	29.1	31.2	29.2	30.2	+1.3	84	—	0.9	—
	Noakhally	Noakhally	30.000	29.704	29.853	30.025	—	30.0	27.0	30.4	27.1	28.6	—	80	—	0.0	—
South Bengal.	Farrukpore	Farrukpore	30.100	29.750	29.924	30.016	—0.10	30.0	28.5	30.8	27.2	29.0	+0.5	84	—	0.0	—
	Dacca	Dacca	30.103	29.754	29.924	30.007	—0.32	30.0	28.2	30.8	27.0	29.0	+0.8	81	+1	1.0	—0.8
	Tipperah	Comilla	30.154	29.784	29.963	30.020	—0.01	30.4	28.1	31.2	27.7	29.0	+1.0	82	—	1.1	—
	Mymensingh	Mymensingh	30.082	29.737	29.947	30.008	—0.27	30.4	28.1	31.1	28.0	29.5	+1.8	82	—	0.6	—
North Bengal.	Bogra	Bogra	30.026	29.653	29.840	30.033	—0.18	31.0	27.0	30.4	28.0	29.6	+1.0	73	—	0.0	—
	Pahna	Serajpore	30.101	29.720	29.947	30.023	—0.25	30.8	28.0	30.8	28.1	29.4	+1.0	80	—	0.2	—
	Rajahmundry	Rajahmundry	30.174	29.770	29.930	30.006	—0.01	30.3	28.0	30.3	28.7	29.5	+2.4	70	—	0.2	—
	Maldah	Maldah	30.080	29.704	29.897	30.022	—	30.0	28.7	30.3	28.0	29.3	—	64	—	0.0	—
North Bengal.	Dinapore	Dinapore	30.117	29.615	29.870	30.000	—0.30	30.1	28.0	30.7	28.1	29.4	+1.5	77	—	0.1	—
	Kungpore	Kungpore	30.130	29.654	29.892	30.015	—0.14	30.0	28.0	30.6	28.0	29.3	+3.5	80	—	0.0	—
	Jalpaiguri and Cooch Behar.	Jalpaiguri	29.805	29.470	29.637	30.001	—0.25	30.0	28.0	30.0	28.0	29.0	—	86	—	0.0	—
	Darjeeling Hill Tracts.	Darjeeling	29.116	29.704	29.903	—	—	30.3	28.0	30.8	28.2	29.5	+5.7	83	+12	3.0	—0.7
North Bengal.	Purneah and North Bhagalpore.	Purneah	30.065	29.617	29.873	30.007	—0.20	30.7	28.0	30.7	28.4	29.5	+0.2	75	+8	0.8	—0.8
	Moulvibazar	Moulvibazar	Observations discontinued.														
	Durgha	Durgha	29.101	29.614	29.850	30.017	—0.17	30.0	28.0	30.1	28.0	29.0	—	68	—5	0.6	—1.6
	Champani	Motihari	29.119	29.641	29.770	30.014	0	30.1	28.0	30.0	28.2	29.1	+1.0	70	—	1.3	—
South Bengal.	Sarai	Chupra	29.080	29.590	29.810	30.012	—0.13	30.3	28.0	30.1	28.0	29.1	+2.7	69	—	0.2	—
	Shahabad	Dohra Nohar Arna	29.113 29.080 29.100	29.641 29.770 29.781	29.850 29.880 29.814	30.022 30.022 30.022	+0.10 —0.02 +0.03	30.3 30.0 30.0	28.0 28.0 28.0	30.0 30.0 30.0	28.0 28.0 28.0	29.0 29.0 29.0	+4.0 +2.5 +2.5	60 61 60	— — —	0.7 1.0 1.0	— — —
	Gya	Gya	29.177	29.613	29.841	30.010	—0.08	30.4	28.0	30.7	28.4	29.6	+1.8	86	+3.1	1.0	—1.3
	Patna	Bankipore	29.083	29.582	29.820	30.023	—0.21	30.4	28.4	30.0	28.7	29.6	+2.3	62	—16	0.7	—1.7
Cuttia Nagpur.	South Bhagalpore and Munger.	Bhagalpore	29.083	29.575	29.832	30.008	—0.13	30.2	28.0	30.0	28.7	29.4	+2.2	61	—	0.8	—
	South Pergunnahs	Naya Doocha	29.041	29.551	29.850	30.020	—	30.0	28.0	30.4	28.4	29.4	—	67	—	0.1	—
	Hasaribagh	Hasaribagh	29.073	29.577	29.807	30.047	—0.02	30.0	28.0	30.0	28.0	29.0	+3.5	68	—10	0.6	—1.3
	Lohardigha	Manchee	27.039	27.030	27.030	30.033	—0.02	30.2	28.0	30.0	28.0	29.0	+3.0	68	—	0.7	—
Assam.	Minghaon	Chyabasa	29.391	29.009	29.214	30.041	—	30.7	27.0	30.1	27.3	28.9	—	61	—	0.4	—
	Assam	Mohagar Dibrugarh Sikhar	29.403 29.400 29.439	29.023 29.045 29.111	29.723 29.881 29.914	30.077 30.080 30.023	+0.07 —0.02 —0.12	30.1 30.7 30.4	27.0 27.0 27.7	30.0 30.0 30.0	27.0 27.0 27.0	28.0 28.0 28.0	+3.2 +3.1 +2.7	68 68 68	+3 +1 +1	0.4 0.6 2.3	—1.4 —0.0 —0.7

* Mean of 17 days.

DISTRICT OBSERVATIONS.

DISTRICT OBSERVATIONS.										Representative stations.	DISTRICT.	METEOROLOGICAL DIVISION.			
RAINFALL.															
Of month.				Since 15th May 1880.											
Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.							
0.23	-0.43	0.0	1.8	74.96	86.46	+16.40	94.8	85.1	Pooree	Pooree	CHINA.				
0.81	-0.70	0.4	1.6	60.61	52.79	+18.02	63.6	61.5	Cuttack	Cuttack	SOUTH-WEST BENGAL.				
1.06	-0.95	0.3	2.3	50.07	54.37	-4.30	83.6	70.5	Balasore	Balasore					
1.38	-1.31	0.7	2.3	58.04	63.75	-5.11	100.9	58.0	Saugor Island	South-West Midnapore and South 24-Pergunnahs.					
1.00	-1.00	0.0	2.0	46.30	52.57	-0.16	80.1	74.2	Midnapore	Midnapore					
1.23	-1.22	0.0	2.5	54.10	52.91	+1.19	92.1	92.8	Calcutta	24-Prerunnahs Howrah, and Hooghly.	SOUTH-WEST BENGAL.				
1.03	-1.03	0.0	2.2	43.80	47.74	-3.93	84.2	78.1	Burdwan	Burdwan					
0.73	-0.73	0.0	2.3	55.93	53.01	+2.92	82.0	81.5	Bankoora	Bankoora					
0.98	-0.98	0.0	2.5	52.46	52.00	-0.14	85.0	85.9	Raniganj	West Burdwan and Beerbhoom.					
0.79	-0.79	0.0	2.0	51.07	51.34	-0.17	82.1	81.0	Gersampore	Moorsheadabad	SOUTH-WEST BENGAL.				
1.04	-1.04	0.0	2.0	51.01	50.18	+1.43	88.0	80.2	Krishnagore	Nuddea					
1.11	-1.11	0.0	2.5	54.75	54.35	+0.42	97.0	87.1	Jessore	Jessore and Khoolna					
0.73	-0.73	0.0	2.0	100.30	114.51	-14.16	111.2	109.0	Chittagong	Chittagong					
0.80	-0.45	0.5	2.5	65.01	82.40	-14.88	99.0	110.7	Demagiri	Chittagong Hill Tracts	EAST BENGAL.				
1.05	-1.05	0.0	2.1	75.41	75.06	+0.35	103.0	107.0	Barrisal	Backergunge					
1.05	-0.95	0.5	2.3	90.00	108.16	-17.27	114.0	110.4	Noakholly	Noakholly					
1.20	-1.20	0.0	2.3	62.31	56.92	+5.39	85.2	80.1	Furreedpore	Furreedpore					
1.20	-1.20	0.0	2.7	70.19	60.50	+16.39	107.0	94.0	Dacca	Dacca	EAST BENGAL.				
1.02	-1.02	0.0	2.8	56.02	70.31	-13.71	95.1	99.3	Comillah	Tipperah					
0.92	-0.92	0.0	1.8	58.72	62.23	-10.35	107.0	90.8	Mymensingh	Mymensingh					
0.78	-0.78	0.0	1.6	65.61	58.01	+7.60	103.7	79.3	Bogra	Bogra					
1.05	-1.05	0.0	2.0	65.37	54.40	+9.97	103.6	84.3	Serajunge	Pubna	NORTH BENGAL.				
0.70	-0.70	0.0	1.5	54.35	54.68	-0.23	90.3	78.0	Rampore Beau-lah.	Rajshahye					
0.30	-0.26	0.5	2.1	59.79	54.01	-1.02	74.0	65.9	Maldah	Maldah					
0.64	-0.44	0.0	1.6	57.40	37.58	-0.39	83.6	70.6	Dinapore	Dinapore					
0.43	-0.43	0.0	1.4	85.87	74.20	+11.01	87.7	77.0	Rungpore	Rungpore	NORTH BENGAL.				
0.39	-0.39	0.0	1.6	117.75	111.04	+0.00	105.4	98.0	Jalpigoree	Jalpigoree and Cooch Behar.					
0.67	-0.67	0.0	2.7	133.40	122.04	+11.41	127.6	110.4	Darjeeling	Darjeeling Hill Tracts.					
0.50	-0.50	0.0	1.4	75.00	59.18	+15.82	70.0	71.2	Purnea	Purnea and North Dinagpore.					
0.20	-0.37	0.3	1.8	48.83	43.93	+4.92	71.4	59.4	Monufpore	Monufpore	NORTH BENGAL.				
0.40	-0.40	0.0	1.2	52.											

Table of Rainfall recorded at S

[illegible]

Bengal in February 1890.

22	23	24	25	26	27	28	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January up to 28th Feb. 1890.	Average rainfall from 1st January up to 28th February.	Station.	District.	Metereological division.
...	Nil	1.7	Nil	1.10	Nil	0.04	1.35	Pooree	Pooree	ORISSA.
...	Nil	1.2	Nil	0.72	Nil	0.00	0.99	Khurda.	...	...
...	Nil	1.7	Nil	0.59	Nil	0.07	0.97	Bangur	...	...
...	Nil	1.8	Nil	0.68	Nil	0.20	1.40	Pala Point.	...	...
...	Nil	?	?	?	?	?	?	Gov.	...	...
...	Nil	?	?	?	?	?	?	Pipli.	...	...
...	Nil	0.9	Nil	0.61	Nil	0.32	0.96	Jagatsingpora.	Cuttack	...
...	Nil	2.7	Nil	0.64	0.07	0.00	0.60	Bunki.	...	...
...	Nil	2.6	Nil	0.56	Nil	Nil	0.60	Cuttack.	...	...
...	Nil	1.2	Nil	0.73	Nil	0.21	1.17	Kondrapara.	...	...
...	Nil	1.7	Nil	1.21	Nil	Nil	1.74	Jajpore.	...	...
...	Nil	?	Nil	?	?	?	?	Dharmasala.	...	...
...	Nil	?	Nil	?	?	?	?	Salipore.	...	...
...	Nil	1.8	Nil	1.02	Nil	0.40	1.50	Chandbali	Balasore.	...
...	Nil	2.3	Nil	1.32	0.30	0.30	1.71	Bhandruk.	...	...
...	Nil	1.9	Nil	0.84	Nil	Nil	1.09	Sorah.	...	...
...	0.20	1	2.0	0.20	1.27	0.20	2.00	Balasore.	...	...
...	0.12	1	2.1	0.12	1.02	0.15	1.74	J-Balasore.	...	...
...	Nil	2.5	Nil	0.74	Nil	Nil	1.40	Baripodah.	...	...
...	0.09	1	1.8	0.09	1.38	0.09	1.09	Contal	Midnapore	SOUTH-WEST BENGAL
...	0.11	1	2.3	0.11	1.17	0.11	1.21	Saugor Island	...	
...	Nil	1.6	Nil	1.16	Nil	0.20	1.54	Tumlook.	...	
...	Nil	2.1	Nil	0.84	Nil	Nil	1.50	Midnapore.	...	
...	Nil	2.0	Nil	0.89	Nil	0.11	1.40	Ghatol.	...	
...	Nil	?	Nil	?	?	0.12	?	Kutubhaty.	...	
...	Nil	?	Nil	0.91	Nil	Nil	1.41	Garbeta.	...	...
...	Nil	2.9	Nil	1.08	Nil	0.38	2.32	Diamond Har- bour.	St-Petersburgh	...
...	Nil	?	Nil	?	?	0.05	?	Gunning Town.	...	...
...	Nil	3.1	Nil	1.47	Nil	1.07	1.16	Alipore Jail.	...	...
...	Nil	2.1	Nil	1.22	Nil	0.33	1.72	Barackpore.	...	...
...	Nil	2.6	Nil	1.12	Nil	0.85	1.64	Dum-Dum.	...	...
...	Nil	2.6	Nil	1.20	Nil	1.10	1.88	Barakot.	...	...
...	Nil	2.1	Nil	1.04	Nil	1.40	1.46	Buseerhat.	...	...
...	Nil	2.0	Nil	1.26	Nil	0.52	1.85	Howrah	Howrah.	...
...	Nil	2.5	Nil	1.44	Nil	0.40	1.93	Moharrekha (Dulchaberiah)	...	...
...	Nil	2.0	Nil	1.24	Nil	0.36	1.60	Serampore	Hooghly.	...
...	Nil	2.3	Nil	1.27	Nil	0.41	1.83	Hooghly.	...	...
...	Nil	2.3	Nil	1.27	Nil	0.46	1.60	Jehanabad.	...	...
...	Nil	1.8	Nil	1.08	Nil	Nil	1.54	Culina	Burdwan.	...
...	Nil	2.4	Nil	0.77	Nil	0.18	1.41	Burdwan.	...	...
...	Nil	2.3	Nil	1.10	Nil	Nil	1.01	Cutwa.	...	...
...	Nil	2.1	Nil	1.10	Nil	0.07	1.52	Ranachunga.	...	...
...	Nil	?	Nil	?	?	?	?	Mankur.	...	...
...	Nil	2.4	Nil	1.46	Nil	0.07	1.42	Bankoora	Bankoora.	...
...	Nil	1.7	Nil	0.70	Nil	Nil	1.08	Bishenpore.	...	...
...	Nil	2.0	Nil	0.58	Nil	0.11	0.91	Malara.	...	...
...	Nil	2.2	Nil	0.55	Nil	Nil	1.02	Khutra.	...	...
...	Nil	?	Nil	?	?	?	?	Indra.	...	...
...	Nil	?	Nil	?	?	?	?	Kotalpore.	...	...
...	Nil	?	Nil	?	?	?	?	Anda.	...	...
...	Nil	?	Nil	?	?	?	?	Ganesajalghata.	...	...
...	Nil	?	Nil	0.77	Nil	Nil	1.00	Katpore.	...	...
...	Nil	?	Nil	?	?	0.11	?	Sonamukhi.	...	...
...	Nil	2.2	Nil	0.83	Nil	Nil	1.39	Bh. Scory	Beerbhoom.	...
...	Nil	1.8	Nil	0.67	Nil	Nil	1.48	Hemantpore.	...	...
...	Nil	1.7	Nil	0.83	Nil	Nil	1.37	Rampore Har.	...	...
...	Nil	?	Nil	?	?	?	?	Rohar.	...	...
...	Nil	?	Nil	?	?	?	?	Marat.	...	...
...	Nil	1.7	Nil	0.93	Nil	0.30	1.39	Ranaghat	Nudda.	...
...	Nil	2.2	Nil	1.02	Nil	Nil	1.44	Kishinagar.	...	...
...	Nil	1.9	Nil	1.11	Nil	0.05	1.42	Choudhanga.	...	...
...	Nil	1.8	Nil	1.02	Nil	0.10	1.33	Meherpore.	...	...
...	Nil	2.2	Nil	1.11	Nil	0.15	1.49	Kooshtea.	...	...
...	Nil	2.2	Nil	0.93	Nil	2.03	1.33	Ratkira	Kheola.	...
...	Nil	1.8	Nil	1.31	Nil	1.48	2.09	Bachhat.	...	...
...	Nil	2.2	Nil	1.23	Nil	1.4	1.63	Kheola.	...	...
...	Nil	?	Nil	?	?	?	?	Naktapur.	...	...
...	Nil	?	Nil	?	?	?	?	Rampal.	...	...
...	Nil	2.0	Nil	1.16	Nil	2.34	1.64	Narail	Jessore.	...
...	Nil	2.7	Nil	0.82	Nil	1.50	1.50	Jessore.	...	...
...	Nil	2.1	Nil	1.20	Nil	0.18	1.64	Jhemdah.	...	...
...	Nil	2.2	Nil	1.06	Nil	0.42	1.50	Mazmorah.	...	...
...	Nil	1.0	Nil	1.10	Nil	1.43	1.43	Bougong.	...	...
...	Nil	1.8	Nil	0.85	Nil	Nil	1.27	Kandi	Moorshedabad.	...
...	Nil	2.1	Nil	0.96	Nil	0.12	1.39	Borhampore.	...	...
...	Nil	1.4	Nil	0.86	Nil	Nil	1.30	Lalbagh.	...	...
...	Nil	3.1	Nil	0.76	Nil	Nil	1.32	Amrangunge.	...	...
...	Nil	1.8	Nil	0.71	Nil	Nil	1.15	Jungpore.	...	...
...	Nil	1.6	Nil	0.65	Nil	Nil	1.36	Lalga.	...	...
...	Nil	?	Nil	?	?	?	?	Jamung.	...	...
...	Nil	?	Nil	?	?	?	?	Akhong.	...	...
...	Nil	?	Nil	?	?	?	?	Patanabari.	...	...
...	Nil	1.3	Nil	0.40	Nil	Nil	1.24	Oct's Haar	Chittagong	EAST BENGAL.
...	Nil	2.0	Nil	1.19	Nil	0.06	1.70	Chittagong.	...	
...	Nil	?	Nil	?	?	?	?	Kutubha.	...	
...	Nil	?	Nil	?	?	?	?	Nakapora.	...	
...	0.08	1	3.4	0.08	1.14	0.08	1.70	Rangamati	Chittagong	Hill tracts.
...	Nil	2.2	Nil	0.61	Nil	0.00	1.29	Kuma.	...	

Table of Rainfall recorded at Station

Meteorological division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
EAST BENGAL —contd.	Bachchikunjo...	Pattabhatly ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Tongapora ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Burisai ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Rhoia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gourmandi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Noakholly ...	Bauphal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Noakholly ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Fondy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Hatichpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Furreedpore ...	Kamganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Madariopore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dacca ...	Furreedpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Cumtundo ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Munsingunge ...	Munsingunge ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dacca ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Narainpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Manickpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill Tipperah ...	Jaydebpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Agartola ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tipperah ...	Comilla ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chandipore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bachchanibaria ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Ranchaudra- pore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nasirabad ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Dowakunda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kacha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mymensingh ...	Lakshmi ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kishoreganje ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Atia (Tangail) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Momenpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Jamalpur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Bengal	Netrokona ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Subornakhally ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Durgapore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sherpore Tean ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dewanganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pabna ...	Pabna ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Seraikunje ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rogra ...	Sheepore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nowkhaila ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baria ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Panchbati ...	Panchbati ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rajshahi ...	Beaulah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Nettore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nasirganj ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lalpur ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Manda ...	Manda ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Maldah ...	Maldah ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Chanchal ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gool ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sibganj ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dinagore ...	Mohadebpore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Charumon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raiganga ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dinagore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Balorghat ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thakurgaon ...	Thakurgaon ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bangore ...	Bhawanipur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		(Gyabanda) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Bangore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Kutubganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jalpaigore ...	Bagdaha ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	(Nalpari) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ulipore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Jalpaigore ...	Jalpaigore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Alipore Doar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fa acotta ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jalgaonj ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cooch Behar ...	Bhawanipur ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	(Nalpari) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dudhaura ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mukhbatia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darjeeling Hill ...	Hatubhatia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Buxa ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Singuri ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Darjeeling ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kalimpong ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Bengal	Kurseong ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Purnea ...	Kamengunge ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Arsonia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Purnea ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Gandara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Bengal	Hatubhatia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hatubhatia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Matari ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Katuganaj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	North Bengal	Madhapore ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madhapore ...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Bengal	Protoganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Protoganj ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

Bengal in February 1890—continued.

11	22	23	24	25	26	27	28	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Heaviest rainfall during the month.	Total rainfall from 1st January 1880 up to 28th Feb., 1890.	Average rainfall from 1st January up to 28th February.	Station.	District.	Metropolitan division.
...	Nd	1.3	Nd	1.13	Nd	0.46	1.90	Patuakhali	Backergunge.	East BENGAL—contd.
...	Nd	1.1	Nd	1.30	Nd	0.48	2.01	Perozepore.		
...	Nd	1.3	Nd	0.96	Nd	0.59	1.65	Barrisal.		
...	Nd	1.3	Nd	0.92	Nd	0.63	1.41	Bhola.		
...	Nd	?	Nd	?	Nd	?	?	Gournaddi.		Noakhally.
...	Nd	?	Nd	?	Nd	?	?	Bamphal.		
...	Nd	0.13	Nd	0.47	Nd	0.41	1.41	Noakhally		
...	Nd	?	Nd	?	Nd	?	?	Penny.		
...	Nd	?	Nd	?	Nd	?	?	Harishpore.		Furzedpore.
...	Nd	?	Nd	?	Nd	?	?	Ramganj.		
...	Nd	0.6	Nd	0.97	Nd	2.12	1.58	Madaripore		
...	Nd	0.1	Nd	1.25	Nd	1.50	1.63	Furzedpore.		
...	Nd	?	Nd	1.22	Nd	1.76	1.62	Gosalunda.		Dacca.
...	Nd	1.3	Nd	1.35	Nd	1.14	1.59	Munshigunge.		
...	Nd	1.3	Nd	1.01	Nd	2.70	1.33	Dacca.		
...	Nd	1.3	Nd	0.90	Nd	0.74	1.34	Naraingunge.		
...	Nd	1.4	Nd	1.15	Nd	1.08	1.59	Munshigunge.		Hill Tipperah.
...	Nd	?	Nd	?	Nd	?	?	Joydebpore.		
...	Nd	2.1	Nd	1.12	Nd	0.30	1.58	Agartola		
...	Nd	3.1	Nd	0.89	Nd	0.80	1.40	Gomilla		
...	Nd	?	Nd	0.89	Nd	1.15	1.44	Chundipore.		Tipperah.
...	Nd	?	Nd	1.30	Nd	2.14	2.07	Brahmanbaria.		
...	Nd	?	Nd	?	Nd	0.65	?	Raschandra.		
...	Nd	?	Nd	?	Nd	1.60	?	Nasirabad.		
...	Nd	?	Nd	?	Nd	1.44	?	Bandi Ind.		Mymensingh.
...	Nd	?	Nd	?	Nd	?	?	Kash.		
...	Nd	?	Nd	?	Nd	0.40	?	Laksham.		
...	Nd	2.3	Nd	0.80	Nd	1.24	1.43	Kishoregunge.		
...	Nd	2.3	Nd	1.14	Nd	1.67	1.57	Ara (Tungul).		
...	Nd	1.5	Nd	1.10	Nd	1.78	1.64	Mymensingh.		
...	Nd	1.1	Nd	1.07	Nd	0.87	1.60	Jamshpore.		
...	Nd	?	Nd	0.40	Nd	0.57	0.60	Netrakona.		
...	Nd	?	Nd	?	Nd	?	?	Subornakhali.		Pubna.
...	Nd	?	Nd	?	Nd	?	?	Durgapore.		
...	Nd	?	Nd	?	Nd	?	?	Sherepore Town.		
...	Nd	?	Nd	?	Nd	?	?	Dewanganj.		
...	Nd	2.3	Nd	1.13	Nd	0.73	1.62	Pubna		NORTH BENGAL.
...	Nd	1.7	Nd	1.01	Nd	0.25	1.40	Serajgunge.		
...	Nd	1.3	Nd	0.70	Nd	0.61	1.25	Sherepore		
...	Nd	1.3	Nd	0.82	Nd	1.48	1.21	Sowahilla.		
...	Nd	1.3	Nd	0.67	Nd	0.70	1.40	Bogra.		Rajshahye.
...	Nd	1.3	Nd	0.52	Nd	1.02	0.84	Bogra.		
...	Nd	1.3	Nd	0.52	Nd	1.02	0.84	Panambili.		
...	Nd	1.3	Nd	0.89	Nd	0.44	1.14	Deaulah.		
...	Nd	1.3	Nd	0.80	Nd	?	1.40	Natore.		Maldah.
...	Nd	1.3	Nd	0.55	Nd	?	1.01	Nagdaon.		
...	Nd	?	Nd	?	Nd	?	?	Dalpo.		
...	Nd	?	Nd	?	Nd	?	?	Manda.		
...	Nd	1.3	Nd	0.90	Nd	0.60	1.37	Maldah		Dinapore.
...	Nd	2.1	Nd	0.60	Nd	?	1.17	Chanchal.		
...	Nd	?	Nd	?	Nd	?	?	Gajul.		
...	Nd	?	Nd	?	Nd	?	?	Sibganj.		
...	Nd	1.7	Nd	0.61	Nd	?	1.08	Mohadhpore.		Rungpore.
...	Nd	1.6	Nd	0.52	Nd	?	0.80	Chitramon.		
...	Nd	1.4	Nd	0.50	Nd	0.12	1.07	Raigunge.		
...	Nd	1.8	Nd	0.57	Nd	0.49	0.85	Dinapore.		
...	Nd	1.6	Nd	0.56	Nd	0.61	0.81	Haldighat.		Julpore.
...	Nd	?	Nd	?	Nd	0.24	?	Thakurgaon.		
...	Nd	1.2	Nd	0.51	Nd	0.84	0.85	Bhawaniganj.		
...	Nd	1.7	Nd	0.38	Nd	0.57	0.62	Gyadanda.		
...	Nd	1.3	Nd	0.51	Nd	0.75	0.82	Rungpore.		Cooch Behar.
...	Nd	1.3	Nd	0.51	Nd	0.80	1.02	Kurigram.		
...	Nd	?	Nd	?	Nd	?	?	Haldighat.		
...	Nd	?	Nd	?	Nd	?	?	(Niphamaon.)		
...	Nd	1.4	Nd	0.30	Nd	0.18	0.84	Ulipora.		Julpore.
...	Nd	?	Nd	?	Nd	?	?	Julpore.		
...	Nd	?	Nd	?	Nd	?	?	Alipore Doar.		
...	Nd	?	Nd	?	Nd	?	?	Palacotta.		
...	Nd	?	Nd	?	Nd	?	?	Debaganj.		Darjeeling.
...	Nd	?	Nd	?	Nd	?	?	Bhogolpore.		
...	Nd	1.3	Nd	0.34	Nd	0.83	0.88	(Nayrakatta.)		
...	Nd	1.4	Nd	0.30	Nd	0.55	0.72	Dumaila.		
...	Nd	1.3	Nd	0.24	Nd	1.03	0.65	Cooch Behar.		North Bengal.
...	Nd	1.7	Nd	0.20	Nd	0.40	0.65	Mickhanga.		
...	Nd	?	Nd	?	Nd	?	?	Matabhanga.		
...	Nd	?	Nd	?	Nd	?	?	?		
...	Nd	1.4	Nd	0.01	Nd	0.01	1.20	Buxa		Darjeeling.
...	Nd	1.3	Nd	0.23	Nd	0.51	1.05	Shiguri.		
...	Nd	?	Nd	?	Nd	?	?	Darjeeling.		
...	Nd	?	Nd	?	Nd	?	?	Kalimpong.		
...	Nd	?	Nd	?	Nd	?	?	Kurseong.		Purneah.
...	Nd	1.4	Nd	0.44	Nd	1.30	1.00	Kisankunje.		
...	Nd	1.3	Nd	0.55	Nd	0.14	1.04	Arurach.		
...	Nd	?	Nd	?	Nd	?	?	Purneah.		
...	Nd	?	Nd	?	Nd	?	?	Gondikara.		North Bengal.
...	Nd	?	Nd	?	Nd	?	?	Dalarampore.		
...	Nd	?	Nd	?	Nd	?	?	Makara.		
...	Nd	?	Nd	?	Nd	?	?	Kaliaganj.		
...	Nd	1.4	Nd	0.56	Nd	?	1.33	Maddapore.		North Bengal.
...	Nd	1.0	Nd	?	Nd	?	0.80	Soanool.		
...	Nd	?	Nd	?	Nd	?	?	Protaganj.		

Table of Rainfall recorded at Stations in

[illegible]

	21	22	23	24	25	26	27	28	Number of rainy days.	Average number of rainy days.	Total rainfall for the month.	Average rainfall for the month.	Highest rainfall during the month.	Total rainfall from 1st January 1900 up to 28th Feb. 1900.	Average rainfall from 1st January up to 28th February.	Station.	District.	Meteorological division.
...	0'01	1	1'1	0'01	0'26	0'01	0'14	1'08	Tajpore ... Durbhanga ... NORTH BHARH—contd.		
...	NH	1'6	NH	0'43	NH	0'23	0'06	Durbhanga ...		
...	NH	1'1	NH	0'41	NH	0'44	1'15	Madhubani ...		
...	NH	?	NH	?	NH	NH	?	Bahera ...		
...	NH	?	NH	?	NH	>11	?	Rohara ...		
...	NH	1'3	NH	0'30	NH	0'39	0'33	Sitamarhi ... Monasfepore.		
...	NH	1'4	NH	0'50	NH	0'06	1'29	Monasfepore.		
...	0'08	1	1'5	0'05	0'46	0'06	0'10	1'11	Hajipore.		
...	NH	?	NH	?	NH	NH	?	Parsa.		
...	NH	?	NH	?	NH	NH	?	Mahua.		
...	NH	?	NH	?	NH	0'40	?	Siukhar.		
...	NH	?	NH	?	NH	0'34	?	Fupri.		
...	NH	1'3	NH	0'29	NH	0'34	0'73	Motihari ... Champaran.		
...	NH	1'1	NH	0'41	NH	0'73	1'10	Bettiah.		
...	0'09	1	?	0'09	?	0'09	0'05	?	Bagaha.		
...	NH	?	NH	?	NH	NH	?	Burharwa.		
...	NH	1'3	NH	0'49	NH	NH	1'26	Gopalgunge ... Saran.		
...	0'39	1	1'3	0'40	0'43	0'09	0'09	1'23	Sawan.		
...	NH	1'1	NH	0'43	NH	NH	1'14	Chaprah.		
...	NH	1'6	NH	0'33	NH	NH	1'11	Buxar ... Shahabad ... SOUTH BHARH.		
...	NH	1'9	NH	0'30	NH	NH	0'32	Dehree.		
...	NH	1'3	NH	0'40	NH	NH	1'17	Bhutnook.		
...	NH	1'6	0'05	0'43	0'05	0'05	0'36	Bansaram.		
...	0'04	1	1'6	0'04	0'54	0'04	0'04	1'37	Arrah.		
...	NH	?	NH	?	NH	NH	?	Mohanish.		
...	NH	1'4	NH	0'34	NH	NH	0'05	Aurangabad ... Gya.		
...	NH	1'3	NH	0'30	NH	NH	1'33	Gya.		
...	NH	1'1	NH	0'48	NH	NH	1'16	Nowadah.		
...	0'07	1	1'1	0'07	0'40	0'07	0'07	1'13	Jehanabad.		
...	NH	?	NH	?	NH	NH	?	Arwal.		
...	NH	?	NH	?	NH	NH	?	Daudnagar.		
...	NH	?	NH	?	NH	NH	?	Sheorghati.		
...	NH	?	NH	?	NH	NH	?	Khajauli.		
...	NH	?	NH	?	NH	NH	?	Patni Barwan.		
...	0'03	1	1'3	0'03	0'47	0'03	0'03	1'16	Patna ... Patna.		
...	NH	0'5	NH	0'39	NH					

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS
TAKEN IN BENGAL, AND OF THE METEOROLOGICAL OBSERVATIONS
TAKEN IN ASSAM, FOR THE MONTH OF FEBRUARY 1890.**

THE normal meteorological conditions obtaining in Bengal during February are to a considerable extent similar to those of January; but during February, and particularly towards its close, the transition period between the cold and hot season commences to make itself felt. One of the most important features of February is undoubtedly the rather rapid increase of temperature which commences in this month and which continues during the following two or three months. This increase is due to the rapidly increasing elevation of the sun, and this heating effect is much more pronounced over the land area than over the sea, so that the dry northerly winds at the southern stations commence to be replaced by moist southerly winds blowing from the sea. The normal conditions in February are therefore comparatively simple. Winds continue generally northerly and north-westerly, except at the southern stations. The sky is clear, and unless conditions are changed by the occurrence of storms, no rain falls. Pressure remains high, while temperature steadily rises, though the night temperatures usually remain fairly low. Humidity also continues low over the greater part of the province except at the southern stations, where the southerly winds set in when rapid and large changes in humidity occur. These normal conditions are, however, liable to be disturbed by the formation or advance of barometric depressions or storms over Northern and Central India which drift eastwards and southwards, giving heavily-clouded skies, a moist atmosphere and rain to Bengal and Behar, the rainfall during such storms being generally fairly well distributed. Occasionally also by the interaction of the moist sea winds with the dry land breezes local storms, called nor'-westers, are produced which give rainfall, which is only local and very irregularly distributed. Such storms are, however, generally confined to the close of the month, and when they do occur they are sometimes rather violent and attended with more or less severe hailstorms.

The whole of the rainfall in February is therefore brought about by these abnormal conditions, and it is generally small in amount and somewhat irregularly distributed, though usually larger than in January. The normal fall averages from about an inch in East and South-West Bengal and Orissa, and rather more than half an inch in North Bengal and Chutia Nagpur, to about four-tenths of an inch in Behar.

Meteorology of the month.—The important features in the meteorology of February 1890 in Bengal have been—

- 1st.—Pressure has been in defect of the normal in all districts, the usual defect averaging about two-hundredths of an inch, and being decidedly larger in East Bengal and parts of Assam than it has been elsewhere, and the defects being smallest in the western districts of Behar.
- 2nd.—Temperature has varied very largely during the month. It was considerably below the normal in the first week, about normal in the second week, and about three or four degrees above it for the remainder of the month.
- 3rd.—The variations of humidity from the normal have been considerable but about equal numbers of stations have shown defective and excessive humidity, so that the general average is not very far from normal. Cloud proportion has in all districts been very considerably below the normal, the defects in several cases ranging up to about twenty per cent.
- 4th.—There has been a singular absence of influential barometric depressions or storms visiting the province during February, and though two such depressions have affected the weather slightly, in no case have these depressions been of sufficient importance to be classed as storms, and in no case have they given any general heavy rainfall to any large districts.
- 5th.—The rainfall of February has been therefore confined to a few local showers of little or no importance, and in no district have the falls averaged more than three or four-hundredths of an inch; while South-West Bengal, North Bengal, and Chutia Nagpur have been rainless.

At the close of January two barometric depressions or disturbances had passed through the province, and had given fairly general rain to most of the stations in the plains, while along the line of the hills to the north and north-west of the province snow had fallen. A cold wave of northerly winds then set in over Bengal, and the general weather conditions during the early part of February became those of the north-east monsoon or cold weather in a pronounced form. These conditions lasted throughout the whole of the first week of February, during which skies were almost cloudless, temperature and humidity were decidedly low, while pressure was high, and there was a complete absence of rain. During the second week of the month there were no very large changes in the meteorological conditions from day to day, but there was a steady but slow tendency for the disappearance of the north-east monsoon or cold-weather conditions, and towards the gradual establishment of the conditions which accompany or immediately precede the transition conditions between the hot and cold seasons. There was therefore during this period a steady increase of temperature accompanied by rather high humidity at the southern stations, while also gradually southerly winds commenced to establish themselves over the province. In the third week the general result of the meteorological changes was to entirely efface the conditions which obtain during the cold season and to almost bring about the hot weather conditions. During this week

there was a slight break in the gradual establishment of the hot season conditions during the passage of a barometric depression through the province. This depression was first observed at Jacobabad on the morning of the 15th, and it gradually moved in an easterly direction and passed through Bengal on the 17th and 18th instants. In front of the depression, as usual, temperature was very high, but after it had passed away in an easterly direction, temperature in Bengal fell very decidedly. The effect was, however, only very temporary, and temperature rapidly again became above the normal. Though this depression was a decidedly influential one, as judged by the fall of pressure, yet it was practically of little importance, as it was unaccompanied by rain. Up to the 25th hot weather conditions again commenced to re-establish themselves, but on this date, owing to certain barometric changes which had been taking place, a distinct but feeble low-pressure area was formed over North Bengal and part of Behar. This slight disturbance appears to have been sufficiently influential to produce a few local storms with light rain, and from the 26th to the end of the month a few more or less isolated showers were reported in Behar, North Bengal, and Orissa. Before the close of the month, however, the slight depression had practically entirely filled up, and conditions were those which usually accompany the gradual setting in of the hot weather. The month, therefore, has been characterised by the almost complete absence of any influential storms, and thus rainfall has been almost entirely absent in all districts.

Pressure.—Was during the first week of the month decidedly in excess of the normal, the average excess ranging from four to seven-hundredths of an inch. In the second week this excess had decreased considerably, and it only amounted to between two and four-hundredths of an inch. In the third week conditions had become entirely reversed, and there was a defect which in different districts varied from nine to twelve-hundredths of an inch; while in the fourth week pressure was still in defect, but the defect had decreased usually to between three and four-hundredths of an inch; though in North Bengal and North Behar, owing to the formation of the slight depression above alluded to, the defect equalled from four to six-hundredths of an inch. For the whole month the mean average pressure has been in distinct defect of the normal, the usual defect equalling about two or three-hundredths of an inch; the defects being comparatively large in East Bengal and parts of Assam, and decidedly small in the western parts of Behar.

Temperature.—The average mean temperature for the first week in February was 1.6° in defect of the normal. In the second week temperature had become almost normal. In the third week a general rise in the mean temperature of from four to six degrees took place, and temperature became from four to five degrees above the normal of the period; and in the fourth week there was again a general rise in the mean temperature of the province by about one and-a-half to three degrees, though in this period the actual temperatures were only about three degrees in excess of the normal. For the whole month, therefore, the mean temperature of the province has been about 1.6° in excess of the normal, the excess being largest in such districts as North Bengal, South Behar, and Chutia Nagpur, where it ranged from two to three degrees. In Assam also the mean excess was 2.7° .

The following table shows generally the variation of the mean temperature at nine typical stations in different districts in Bengal, week by week, for the normal temperature:—

STATIONS.	WEEK ENDING 7TH FEBRUARY 1890.			WEEK ENDING 14TH FEBRUARY 1890.			WEEK ENDING 21ST FEBRUARY 1890.			WEEK ENDING 28TH FEBRUARY 1890.		
	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.	Variation of actual mean maximum temperature of week from normal mean.	Variation of actual mean minimum temperature of week from normal mean.	Variation of actual mean daily temperature of week from normal mean.
Cuttack	-2.4	-1.1	-1.7	+0.6	+0.2	+0.5	+3.6	+1.4	+2.5	+5.0	+1.3	+2.0
Calcutta	-1.9	-3.3	-2.5	+1.3	-3.6	-1.1	+3.4	+4.3	+3.8	+3.0	+0.0	+1.0
Dacca	-1.0	-6.8	-3.0	+1.3	-2.3	-0.4	+4.2	+4.7	+4.4	+2.3	+2.0	+2.1
Burdwan	-1.2	-4.3	-2.7	+2.7	-4.0	-0.6	+7.0	+4.0	+5.5	+4.1	+1.0	+2.6
Patna	0	-3.1	-1.6	+6.2	+0.5	+2.4	+6.0	+4.1	+5.0	+3.4	+3.7	+3.0
Gya	-1.2	-1.3	-1.3	+3.3	+0.3	+1.3	+5.1	+3.8	+4.4	+1.0	+3.8	+2.7
Purneah	-1.4	-4.0	-3.0	+2.4	-1.9	+0.3	+3.8	+0.3	+3.0	+2.5	+1.5	+1.0
Hamirbagh	+0.4	-1.2	-0.5	+3.8	+2.3	+3.1	+5.8	+6.1	+5.4	+3.0	+2.0	+2.0
Darjeeling	+10.7	+3.3	+7.1	+6.4	+6.3	+6.8	+5.6	+6.7	+4.8	+5.6	+2.7	+4.2

Rainfall.—Except for a few light showers in the Chittagong Hill Tracts and in a few districts in Behar and Orissa, the whole province of Bengal has been practically rainless for the month. In Assam, however, a few showers have been reported at Sibsagar, which registered 0.96 inch, and at Silchar, which has received 0.11 inch of rain.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the month of February 1890:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.						RAINFALL.							
	Highest observed during month.	Lowest observed during month.	Averages for month.			Average mean of month above or below normal mean of month.	Of month.			Rainy days.			Since 1st May 1901	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
Orissa*	86°4	48°4	80°8	64°1	74°9	+0°2	0°06	0°31	-0°25	0°2	2°0	-0°7	68°18	64°27
South-West Bengal	86°3	44°9	68°1	58°3	71°7	+1°3	Nil	1°08	-1°08	0°0	2°1	-2°1	64°31	63°00
East Bengal	90°0	47°0	68°4	57°6	70°0	+1°1	0°04	1°08	-0°04	0°1	2°2	-2°1	76°00	75°21
North Bengal*	92°6	43°7	62°8	52°0	67°7	+2°3	Nil	0°27	-0°27	0°0	1°6	-1°6	73°54	71°00
North Behar*	86°3	41°9	60°6	50°4	65°5	+1°5	0°01	0°48	-0°48	0°1	1°3	-1°3	67°00	66°30
South Behar	92°6	48°6	63°2	54°3	68°7	+2°7	0°00	0°44	-0°44	0°2	1°6	-1°4	64°18	64°00
Chutia Nagpur	87°3	46°0	61°3	48°6	65°4	+2°3	Nil	0°07	-0°07	0°0	1°9	-1°9	66°00	66°30
Assam	86°4	43°6	60°3	50°3	65°0	+2°7								

* Pooree, Julpigoree, Durbhanga, and Chybamra not included.

METEOROLOGICAL OFFICE, BENGAL.

The 11th March 1890.

A. PRIDLER,

Meteorological Reporter to the Govt. of Bengal.

Abstract of the Results of the Barometric and Thermometric Observations taken at 10 a.m. at the Meteorological Office, Chowringhee, in the month of February 1890.

	Inches.	Date.
The mean pressure at 10 A.M. during the month ...	30.036	
The mean temperature at 10 A.M. during the month ...	75.8	
The highest temperature during the month ...	92.0	26th.
The lowest temperature during the month ...	52.4	2nd and 3rd.
The absolute range of temperature during the month ...	39.6	
The mean daily range of temperature during the month ...	24.2	
The greatest range of temperature in one day during the month ...	29.0	12th.
The mean 10 A.M. humidity during the month ...	55	
The mean 10 A.M. vapour tension during the month ...	486	
The total rainfall of the month ...	Nil.	
The greatest fall in 24 hours ...	Nil.	
The number of rainy days in the month ...	Nil.	

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA,

The 10th March 1890.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 2nd to 8th March 1890.

MONTH.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	TEMPERATURE.					HYGROMETRY.				Rainfall past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
		Inches.	°	°	°	°	°	°	Inches.	°	%	Inches.
Mar 1890 ...	2nd ...	30.019	76.2	83.0	15.5	68.4	73.6	66.6	.560	62.2	67	0.04
" " ...	3rd ...	.040	77.6	89.0	23.1	65.9	80.6	72.4	.680	68.0	65	.....
" " ...	4th ...	.044	79.6	90.0	20.9	69.1	82.6	74.5	.747	70.5	67	.....
" " ...	5th ...	.077	77.8	85.1	14.7	70.4	79.1	66.0	.465	56.0	47	.....
" " ...	6th ...	.027	77.1	87.7	21.3	66.4	79.3	69.6	.588	63.5	58	.....
" " ...	7th ...	29.985	77.6	87.8	20.5	67.3	79.3	67.6	.520	60.1	52	.....
" " ...	8th ...	.064	77.2	90.0	25.6	64.4	82.0	72.6	.675	67.6	61	.....

The mean 10 A.M. pressure of the seven days ... 30.025

The mean temperature of the seven days ... 77.6

The extreme variation of temperature ... 25.6

The maximum temperature ... 90.0

The mean 10 A.M. relative humidity of the seven days ... 60

The total fall of rain from 2nd to 8th March 1890 ... 0.04

The daily mean temperatures are the crude means of maximum and minimum temperatures.

C. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, INDIA ;

The 10th March 1890.

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISION.			STATION OBSERVATIONS.															
DISTRICT.	Representative station.	AIR PRESSURE.			WIND.		TEMPERATURE.								Mean, 8 A.M.			
		Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature of week.	Mean daily temperature of week.	Variation from normal mean of week.				
CHINA.	Pooree	29.001	30.013	+	Variable SW & NW	237	87.2	1st Mar.	70.4	1st Mar.	86.1	73.6	79.1	+1.4				
	Gopalpore	29.000	30.005	+	SW & NW	235	86.7	7th	66.5	3rd, 6th	84.7	68.0	77.1	-0.9				
	Fale Point	29.021	30.013	+	NW	208	89.5	3rd			85.0	68.0	77.1	-0.9				
SOUTH-WEST BENGAL.	Cuttack	29.040	30.020	+	Calm	84.7	84.4	2nd, 6th	68.8	3rd	83.8	70.3	82.1	-1.1				
	Balasore	29.046	30.027	+	NNW	94.4	81.4	6th	61.6	3rd	81.5	67.5	77.0	-1.9				
	South-West Midnapore	29.050	30.024	+	NW & SW	261	88.2	6th	71.5	3rd	84.3	74.2	79.3	+0.1				
SOUTH-WEST BENGAL.	South 24-Pergunnahs	29.070	30.025	+	Variable	119.1	94.3	6th	63.9	1st	81.2	68.7	79.0	-1.2				
	Midnapore	29.070	30.025	+	Variable	119.1	94.3	6th	63.9	1st	81.2	68.7	79.0	-1.2				
	24-Pergunnahs	29.007	30.024	+	Westerly	82	88.3	6th	62.8	1st	80.1	68.0	79.4	-1.0				
SOUTH-WEST BENGAL.	Hurdwan	29.005	30.000	+	Calm	54.4	92.8	6th	58.6	1st	88.0	64.9	77.8	-0.1				
	Bankura	29.063	30.020	+	Calm	80.4	92.1	6th	61.3	1st	89.3	64.6	76.9	0				
	Roorbhom	29.081	30.037	+	South-westerly	66.7	92.8	6th	59.8	7th	89.6	64.9	76.8	-0.3				
SOUTH-WEST BENGAL.	West Hurdwan	29.030	30.000	+	South-westerly	84.0	89.6	2nd, 6th	56.7	1st	86.0	63.0	74.5	-1.3				
	Moorah-dabad	29.066	30.034	+	Variable	104.9	91.9	6th	64.8	1st	89.2	62.3	78.7	+0.7				
	Nuddea	29.081	30.035	+	Variable	104.9	91.9	6th	64.8	1st	89.2	62.3	78.7	+0.7				
SOUTH-WEST BENGAL.	Jessore	29.081	30.035	+	Calm	50.3	91.8	6th, 6th	61.0	1st	85.1	65.4	76.8	-0.9				
	Khoolna	29.081	30.035	+	Calm	50.3	91.8	6th, 6th	61.0	1st	85.1	65.4	76.8	-0.9				
	Chittagong	29.081	30.035	+	Calm & Westerly	51.0	90.6	6th, 6th	60.0	6th, 7th	84.2	61.3	77.2	+2.4				
SOUTH-WEST BENGAL.	Chittagong Hill Tracts	29.081	30.035	+	Calm & Westerly	51.0	90.6	6th, 6th	60.0	6th, 7th	84.2	61.3	77.2	+2.4				
	Demagiri	29.081	30.035	+	Calm & Westerly	51.0	90.6	6th, 6th	60.0	6th, 7th	84.2	61.3	77.2	+2.4				
	Backergunge	29.081	30.035	+	Calm	51.0	90.6	6th, 6th	60.0	6th, 7th	84.2	61.3	77.2	+2.4				
SOUTH-WEST BENGAL.	Noakholly	29.081	30.035	+	Northerly	52.0	97.0	6th	61.0	3rd	85.3	65.7	78.0	+0.3				
	Furzedpore	29.081	30.035	+	South-westerly	54.1	95.5	2nd, 6th	61.0	1st	84.9	62.4	73.0	-0.7				
	Dacca	29.081	30.035	+	Westerly	75.3	91.1	6th	61.3	1st	87.0	64.3	76.7	-0.5				
SOUTH-WEST BENGAL.	Commillah	29.081	30.035	+	South-westerly	48.4	90.4	6th, 6th	63.9	6th	86.7	63.6	75.1	+0.2				
	Mymensingh	29.081	30.035	+	ENE	70.7	94.0	6th	60.7	7th	84.5	61.0	72.8	+4.8				
	Bogra	29.081	30.035	+	Calm	50.8	90.5	6th	64.0	1st	87.3	59.7	73.4	+0.6				
SOUTH-WEST BENGAL.	Patna	29.081	30.035	+	SW	50.1	90.1	6th	64.0	1st	86.6	59.6	73.1	-1.0				
	Kajshabye	29.081	30.035	+	SW	50.0	90.0	2nd & 6th	63.7	1st	85.7	59.3	73.0	-0.8				
	Maldah	29.081	30.035	+	SW	71.6	90.8	6th	63.4	1st	87.6	59.2	71.9	-0.2				
SOUTH-WEST BENGAL.	Dinapore	29.081	30.035	+	NW & SW	98.9	87.1	2nd-6th	60.2	1st	80.0	57.6	71.0	+0.1				
	Rungpore	29.081	30.035	+	Easterly	75.0	86.2	3rd	64.0	1st	85.0	56.4	70.7	-0.5				
	Julpikoree	29.081	30.035	+	NE & NW	94.0	85.0	1st & 7th	68.0	6th & 7th	83.0	54.8	68.4	-1.0				
SOUTH-WEST BENGAL.	Cooch Behar	29.081	30.035	+	NE & NW	94.0	85.0	1st & 7th	68.0	6th & 7th	83.0	54.8	68.4	-1.0				
	Darjeeling Hill Tracts	29.081	30.035	+	Variable	105.0	95.0	6th	67.1	7th	83.9	56.6	69.1	-2.1				
	Purneah	29.081	30.035	+	Variable	105.0	95.0	6th	67.1	7th	83.9	56.6	69.1	-2.1				
SOUTH-WEST BENGAL.	North Bhagulpore	29.081	30.035	+	Variable	105.0	95.0	6th	67.1	7th	83.9	56.6	69.1	-2.1				
	Mounierpore	29.081	30.035	+	Variable	105.0	95.0	6th	67.1	7th	83.9	56.6	69.1	-2.1				
	Durbhanga	29.081	30.035	+	Westerly	95.0	87.2	4th	67.2	Mar.	84.8	57.1	71.1	-1.1				
SOUTH-WEST BENGAL.	Chumpanan	29.081	30.035	+	WSW	159.8	86.2	4th	60.9	3rd	81.9	53.0	67.8	-1.7				
	Barua	29.081	30.035	+	WSW	81.9	85.3	7th	60.9	3rd	80.9	57.1	69.0	-2.3				
	Shahabad	29.081	30.035	+	SW	152.6	90.8	6th	67.0	2nd	85.0	53.2	73.3	+1.4				
SOUTH-WEST BENGAL.	Gya	29.081	30.035	+	Westerly	116.0	86.4	6th	66.4	1st & 7th	84.1	51.2	72.8	+0.3				
	Patna	29.081	30.035	+	Variable	95.9	81.1	6th	60.2	1st	84.7	59.0	73.1	-0.3				
	South Bhagulpore	29.081	30.035	+	Variable	134.3	91.0	6th	60.3	2nd	80.8	52.9	74.3	-1.5				
SOUTH-WEST BENGAL.	Benthal Pergunnahs	29.081	30.035	+	Westerly	69.0	80.0	6th	67.8	1st	83.3	59.6	73.0	-0.5				
	Hasaribagh	29.081	30.035	+	Calm	80.4	80.3	6th	67.0	3rd	80.1	59.8	73.4	+0.9				
	Isahardunga	29.081	30.035	+	SW	72.7	80.2	6th	60.8	1st	87.6	51.1	74.3	-1.0				
SOUTH-WEST BENGAL.	Manikgon	29.081	30.035	+	SW	72.7	80.2	6th	60.8	1st	87.6	51.1	74.3	-1.0				
	Sinabhoon	29.081	30.035	+	Westerly	130.2	87.8	6th	67.0	7th	83.0	59.8	71.1	-1.3				
	Chyabassan	29.081	30.035	+	North-westerly	135.0	88.4	1st	67.6	1st	81.7	59.0	70.4	-1.4				
SOUTH-WEST BENGAL.	Chyabassan	29.081	30.035	+	South-westerly	43.4	84.2	6th	60.8	1st	80.4	58.0	76.6	-0.7				

Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the reading during the same period for the year. The humidity of the atmosphere is expressed at percentage, saturated air being presumed by 100. A clear sky is denoted by 0 and an overcast sky by 10. The amount of rain is expressed in inches or average of the rainfall in that district determined from the returns sent in by the subdivisional stations for the period in question during the year. The amount of rain in the district sending in returns divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 7th of March 1890.

DISTRICT OBSERVATIONS.																			
No.	Average amount of rain at 8 A.M. for week.	Rainfall of week at observing station.	OF WEEK.		RAINFALL.										Average number of rainy days.	Normal number of rainy days.	Representative station.	District.	Meteorological Division.
			Mean for district.	Normal mean.	Since 1st of month.			Since 15th May 1889.			Average number of rainy days.	Normal number of rainy days.							
					Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.									
13	3.7	NH	0.06	0.17	0.06	0.17	-0.11	76.06	80.63	+4.57	0.3	0.6	Pooroo	Pooroo	Orissa.				
14	1.5	NH	0.24										Gopalpur						
15	0.3												Pale Point						
16	8.6	NH	0.01	0.21	0.01	0.22	-0.21	86.42	83.01	+3.41	0.2	0.6	Cuttack	Cuttack	Orissa.				
17	0.4	0.42	0.07	0.17	0.07	0.17	-0.10	50.14	51.34	-1.20	0.3	0.6	Balasore	Balasore	Orissa.				
18	6.7	NH	NH	0.25	NH	0.25	-0.23	58.61	64.08	-5.47	0.3	0.6	Sankor Island	South-West Midnapore	Orissa.				
19	3.1	0.20	0.06	0.40	0.06	0.40	-0.34	46.87	53.06	-6.19	0.3	0.7	Midnapore	Midnapore	Orissa.				
20	4.1	0.03	0.23	0.44	0.23	0.44	-0.22	54.32	53.35	+0.97	0.6	1.0	Calcutta	24-Pargunnahs	Orissa.				
21	5.6	NH	NH	0.29	NH	0.29	-0.29	43.89	48.13	-4.24	0.0	0.6	Murdwan	Murdwan	Orissa.				
22	4.0	0.46	0.15	0.23	0.15	0.23	-0.08	50.66	53.24	-2.58	1.0	0.6	Baukora	Baukora	Orissa.				
23	3.1	0.03	0.19	0.14	0.19	0.14	+0.05	52.03	52.76	-0.73	1.3	0.6	Ranergunge	Beerbhoom	Orissa.				
24	7.4	0.13	0.12	0.16	0.12	0.16	-0.04	51.29	51.26	-0.03	1.3	0.6	Berhampore	West Burdwan	Orissa.				
25	0.6	NH	0.07	0.30	0.07	0.30	-0.23	51.64	50.67	+0.97	0.8	0.6	Krishnagar	Moorsheadabad	Orissa.				
26	6.0	NH	0.04	0.32	0.04	0.32	-0.28	54.70	54.85	-0.15	0.2	1.0	Jessore	Nuddea	Orissa.				
27	3.0	0.07	0.05	0.26	0.05	0.26	-0.21	100.40	110.27	-9.87	0.5	1.2	Chittagong	Jessore	Orissa.				
28	5.3	NH	NH	1.02	NH	1.02	-1.02	65.61	80.51	-14.90	0.0	1.3	Demagiri	Khoulina	Orissa.				
29	0.3	NH	NH	0.60	NH	0.60	-0.60	78.41	78.76	-0.35	0.0	0.6	Chittagong Hill Tracts	Chittagong	Orissa.				
30	3.6	NH	NH	0.16	1.27	0.16	1.27	-1.12	91.94	109.43	-17.49	0.5	1.3	Bachergunge	Bachergunge	Orissa.			
31	0.4	0.01	0.03	0.50	0.03	0.50	-0.47	78.22	61.30	+16.92	0.3	0.0	Noakholly	Noakholly	Orissa.				
32	2.0	NH	0.11	0.06	0.11	0.06	-0.05	50.53	70.99	-20.46	0.5	1.1	Furreedpore	Furreedpore	Orissa.				
33	5.1	0.02	0.02	0.47	0.02	0.47	-0.45	58.80	65.70	-6.90	0.2	0.0	Dacca	Dacca	Orissa.				
34	2.0	0.00	0.05	0.22	0.05	0.22	-0.17	65.67	58.90	+6.77	0.5	0.3	Commillah	Tipperah	Orissa.				
35	4.1	0.08	0.16	0.33	0.16	0.33	-0.17	55.53	54.73	+0.80	2.0	0.7	Mymensingh	Mymensingh	Orissa.				
36	1.9	0.03	0.03	0.24	0.03	0.24	-0.21	54.34	54.52	-0.18	0.3	0.3	Bogra	Bogra	Orissa.				
37	0.9	0.15	0.08	0.20	0.08	0.20	-0.12	50.87	54.91	-14.04	0.5	0.4	Soragunge	Fubna	Orissa.				
38	2.4	NH	0.03	0.13	0.03	0.13	-0.11	57.51	58.01	-0.50	0.2	0.4	Rampore Beantab	Rajshahye	Orissa.				
39	0.4	NH	NH	0.24	NH	0.24	-0.24	50.87	74.50	-23.63	0.0	0.4	Malda	Malda	Orissa.				
40	1.9	NH	NH	0.14	NH	0.14	-0.14	117.73	111.76	+5.97	0.0	0.3	Dinagore	Dinagore	Orissa.				
41	3.0	NH	NH	0.12	NH	0.12	-0.12	133.40	122.10	+11.30	0.0	0.6	Rungpore	Rungpore	Orissa.				
42	1.7	0.06	0.06	0.13	0.06	0.13	-0.07	75.05	69.30	+5.75	0.6	0.4	Julpore	Julpore	Orissa.				
43		0.07	0.01	0.07	0.01	0.07	-0.06	44.97	44.14	+0.83	1.0	0.5	Cooh Behar	Cooh Behar	Orissa.				
44	2.7	0.13	0.06	0.09	0.06	0.09	-0.03	52.17	43.21	+8.96	0.7	0.4	Darjeeling Hill Tracts	Darjeeling Hill Tracts	Orissa.				
45	3.6	0.21	0.15	0.21	0.15	0.21	-0.06	64.11	47.38	+16.73	1.0	0.4	Purneah	Purneah	Orissa.				
46	0.0	0.11	0.17	0.09	0.17	0.09	+0.08	40.50	43.53	-3.03	1.3	0.3	North Bhagulpore	North Bhagulpore	Orissa.				
47	4.0	0.29	0.24	0.18	0.24	0.18	+0.06	45.47	40.66	+4.81	1.0	0.4	Mozufferpore	Mozufferpore	Orissa.				
48	5.0	0.08											Burghunga	Burghunga	Orissa.				
49	3.1	0.20	0.17	0.11	0.17	0.11	+0.06	37.50	43.15	-5.65	1.8	0.4	Motnari	Chunparan	Orissa.				
50	2.0	0.04	0.11	0.09	0.11	0.09	+0.02	43.01	41.83	+1.18	0.6	0.4	Chunpara	Saran	Orissa.				
51	2.9	NH	0.06	0.11	0.06	0.11	-0.05	42.83	43.90	-1.07	0.6	0.4	Dahree	Shahabad	Orissa.				
52	2.1	0.16	0.20	0.17	0.20	0.17	+0.03	54.41	51.45	+2.96	1.6	0.3	Buy of	Gya	Orissa.				
53	4.1	0.15	0.26	0.20	0.26	0.20	+0.06	43.37	51.35	-7.98	1.2	0.3	Atch	Patna	Orissa.				
54	3.4	1.19	0.17	1.10	0.17	1.10	-0.93	50.53	50.03	+0.50	2.0	0.3	Banpur	South Bhagulpore	Orissa.				
55	4.9	0.18	0.10	0.27	0.10	0.27	-0.17	48.90	52.60	-3.70	1.0	0.3	Monghyr	Monghyr	Orissa.				
56													Hazariabagh	Hazariabagh	Orissa.				
57													Lonardugga	Lonardugga	Orissa.				
58													Mani moor	Mani moor	Orissa.				
59													Onyebassa	Singbhoon	Orissa.				

NOTE. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater.

Under the head District observations of rainfall the normal means are the means of the district are the numerical average of the rainfall returns received in the district, i.e., from total rainfall at the subdivisions.

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of March 1890.

Meteorological division.	District.	Station.	Rainfall.							TOTAL		Total rain-fall since 1st of month.	Average total rain-fall from 1st of month.	Total rain-fall since 15th May 1889.	Average rain-fall from 15th May to date.
			Saturday, 1st March.	Sunday, 2nd March.	Monday, 3rd March.	Tuesday, 4th March.	Wednesday, 5th March.	Thursday, 6th March.	Friday, 7th March.	Number of rainy days.	Rainfall of week.				
Oudea	Poonce	Poonce	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.23	80.71	82.41
		Khurdah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.07	70.57	67.25
		Banpur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.13	65.30	59.12
		Falee Point	.....	.....	.....	.....	.....	.....	.....	0.24	0.24	0.24	0.24	77.90	64.93
		Pipili	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	?	?	?
	Cuttack	Jaratnigupore	.....	.....	.....	.....	.....	0.03	.....	Nil	Nil	Nil	0.26	74.40	67.03
		Banki	.....	.....	.....	.....	.....	.....	.....	1	0.03	0.03	0.07	52.55	50.12
		Cuttack	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.32	75.19	67.30
		Kendrapara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.10	72.26	64.11
		Jajpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	67.18	65.00
	Balasore	Dharmagala	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	59.25	?
		Salipore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	72.47	?
		Chandball	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	55.04	61.00
		Bhuiddruk	.....	.....	.....	.....	.....	0.09	.....	1	0.09	0.09	0.19	58.04	53.11
		Sorah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.19	46.05	52.16
SOUTH-WEST BENGAL.	Midnapore	Balasore	.....	0.32	.....	.....	.....	.....	.....	1	0.32	0.32	0.19	47.13	50.49
		Jellapore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.14	50.74	52.76
		Baripada	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.09	54.70	54.40
		Contai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.20	55.27	62.30
		Saunder Island	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.23	56.95	60.15
	14-Pargunnahs	Tumlook	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.00	49.00	55.22
		Medinipur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.00	46.26	50.08
		Ghatal	.....	0.23	.....	.....	.....	.....	.....	1	0.23	0.23	0.10	43.43	53.50
		Kulrahaty	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	50.44	?
		Corbetta	.....	1.85	.....	.....	.....	.....	.....	1	1.85	1.85	?	45.17	?
	Howrah	Diamond Harbour	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.57	63.70	60.70
		Canning Town	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	51.85	?
		Alipore Jail	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.00	55.77	57.77
		Barackpore	.....	0.13	.....	.....	.....	.....	.....	1	0.13	0.13	0.01	52.25	51.74
		Dum-Dum	.....	0.00	.....	.....	.....	.....	.....	1	0.00	0.00	0.01	55.52	59.44
	Hooghly	Baranet	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.55	58.71	54.70
		Museerhat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.54	62.41	56.13
		Howrah	.....	0.15	.....	.....	.....	.....	.....	1	0.15	0.15	0.50	59.88	51.00
		Mohuraka (Oolabarish)	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.14	65.04	51.24
		Hooghly	.....	0.16	.....	.....	.....	.....	.....	1	0.16	0.16	0.23	55.79	51.00
SOUTH-EAST BENGAL.	Burdwan	Hooghly	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.34	57.43	49.74
		Jehanabad	.....	1.63	.....	.....	.....	.....	.....	1	1.63	1.63	0.21	43.24	56.55
		Culina	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.34	41.32	41.77
		Burdwan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.45	47.25	40.15
		Culina	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.39	43.11	40.44
	Bankura	Ranagunge	.....	.....	.....	.....	.....	0.03	.....	1	0.03	0.03	0.23	55.63	50.44
		Mankur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	53.80	?
		Bankura	.....	0.03	.....	.....	.....	0.44	.....	2	0.47	0.47	0.44	51.35	55.51
		Bhatnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	57.49	53.03
		Malara	.....	.....	.....	.....	0.03	.....	.....	1	0.03	0.03	0.05	50.03	50.03
	Bachchan	Khatra	.....	0.10	.....	.....	.....	.....	.....	1	0.10	0.10	0.13	60.01	55.00
		Indra	.....	.....	.....	.....	.....	.....	.....	1	0.00	0.00	?	45.25	?
		Kotalpore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	46.40	?
		Anda	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	40.44	?
		Gangajalghata	.....	.....	.....	.....	.....	0.11	.....	1	0.11	0.11	?	50.22	?
SOUTH-EAST BENGAL.	Bachchan	Baspara	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	58.35	?
		Samamukhi	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54.44	?
		Bh. Soory	.....	.....	.....	.....	0.10	0.16	.....	2	0.26	0.26	0.14	59.41	54.00
		Hatnagar	.....	.....	.....	.....	0.31	0.07	.....	1	0.31	0.31	0.00	47.38	55.33
		Hatnagar	.....	.....	.....	.....	0.07	0.07	.....	1	0.07	0.07	0.08	47.46	67.46
	Nadda	Hatnagar	.....	.....	.....	.....	.....	.....	.....	1	0.07	0.07	?	55.11	?
		Murari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	54.10	?
		Banaghat	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	50.10	65.10
		Kachanpur	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	42.95	47.37
		Chandnagar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.35	40.46	53.45
	Khootna	Mohoraka	.....	.....	.....	.....	0.04	0.03	.....	2	0.07	0.07	0.26	53.22	40.07
		Koobha	.....	.....	.....	.....	0.10	0.05	.....	2	0.15	0.15	0.43	54.31	53.98
		Satkhira	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.78	54.84	56.87
		Bachchan	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.31	55.45	55.11
		Koobha	.....	.....	.....	.....	0.25	.....	.....	1	0.25	0.25	0.63	57.07	60.57
SOUTH-EAST BENGAL.	Jasore	Nakipur	.....	.....	.....	.....	.....	.....	.....	1	0.28	0.28	?	?	?
		Kampal	.....	.....	.....	.....	0.28	.....	.....	1	0.28	0.28	?	?	?
		Narai	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.37	52.01	47.58
		Jasore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.50	53.10	55.04
		Jhondah	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.30	50.74	53.25
	Maddhabad	Masoorah	.....	.....	.....	.....	.....	0.04	.....	1	0.04	0.04	0.30	50.44	50.01
		Bongong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.42	47.64	53.25
		Kandi	.....	.....	.....	.....	0.15	0.10	.....	2	0.25	0.25	0.10	55.03	52.07
		Bachchan	.....	.....	.....	.....	0.15	.....	.....	1	0.15	0.15	0.25	40.43	52.75
		Lalbagh	.....	.....	.....	.....	0.05	.....	.....	1	0.05	0.05	0.15	47.18	51.28
SOUTH-EAST BENGAL.	Chittagong	Amnong	.....	.....	.....	.....	.....	.....	.....	1	0.14	0.14	0.18	55.15	53.10
		Jamunee	.....	.....	.....	.....	0.14	.....	.....	1	0.14	0.14	0.18	55.15	53.10
		Amnong	.....	.....	.....	.....	.....	.....	.....	1	0.04	0.04	?	59.06	51.75
		Jamunee	.....	.....	.....	.....	0.06	0.04	.....	2	0.10	0.10	?	43.39	?
		Atangunf	.....	.....	.....	.....	0.06	.....	.....	1	0.06	0.06	?	43.18	?
	Chittagong Hill Tracts.	Patkabari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	?	?
		Cox's Bazar	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.36	123.50	137.14
		Chittagong	.....	.....	.....	.....	.....	.....	.....	0.00	0.00	0.00	0.08	77.68	80.08
		Kutubdia	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	113.00	?
		Saknaga	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	?	63.06	?
SOUTH-EAST BENGAL.	Hackerung	Chittagong	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.07	64.00	52.51
		Kuma	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	1.00	67.20	52.50
		Patkabari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.43	57.00	60.33
		Poronopore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	72.04	71.75
		Burnal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.38	73.21	60.65
	Hackerung	Moala	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.60	80.09	81.79
		Patkabari	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.43	57.00	60.33
		Poronopore	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.44	72.04	71.75
		Burnal	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.38	73.21	60.65
		Moala	.....	.....	.....	.....	.....	.....	.....	Nil	Nil	Nil	0.60	80.09	81.79

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of March 1890—contd.

[illegible]

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 7th of March 1890—concl.

Meteorological Division.	District.	Station.	RAINFALL.							TOTAL.		Total rain-fall since 1st of month.	Average total rain-fall from 1st of month.	Total rain-fall since 15th May 1889.	Average rain-fall from 1st May to date.
			Saturday, 1st March.	Sunday, 2nd March.	Monday, 3rd March.	Tuesday, 4th March.	Wednesday, 5th March.	Thursday, 6th March.	Friday, 7th March.	Number of rainy days.	of Rainfall week.				
NORTH BHAR.	Chumpran...	Motihari	.....	.....	.....	.....	0.19	.....	.....	1	0.19	0.19	0.24	77.53	45
		Bottiah	.....	.....	.....	.....	0.12	.....	.....	1	0.12	0.12	0.21	82.48	46
		Regaha	.....	.....	.....	.....	0.11	.....	.....	1	0.11	0.11	?	70.44	45
SOUTH BHAR.	Baran	Baran	.....	.....	.....	.....	0.21	0.03	.....	2	0.23	0.23	?	81.03	46
		Gopalgunge	.....	.....	.....	0.10	0.13	.....	.....	2	0.23	0.23	0.04	35.73	46
		Sawan	.....	.....	.....	0.14	.....	.....	.....	1	0.14	0.14	0.09	41.43	46
SOUTH BHAR.	Shahabad	Chuprah	.....	.....	.....	0.11	.....	.....	.....	1	0.11	0.11	0.16	60.83	46
		Buzar	.....	.....	.....	0.28	.....	.....	.....	2	0.30	0.30	0.60	47.74	46
		Dubree	.....	.....	.....	0.20	0.00	.....	.....	2	0.20	0.20	0.34	62.05	46
SOUTH BHAR.	Gya	Hindooch	.....	.....	.....	0.40	.....	.....	.....	1	0.40	0.40	0.37	84.56	46
		Sasaram	.....	.....	.....	0.74	0.00	.....	.....	2	0.74	0.74	0.65	81.31	46
		Arwah	.....	.....	.....	0.07	.....	.....	.....	1	0.07	0.07	0.10	63.80	46
SOUTH BHAR.	Patna	Mehaniah	.....	.....	.....	0.23	.....	.....	.....	1	0.23	0.23	?	?	46
		Aurangabad	.....	.....	.....	.....	0.08	0.12	.....	2	0.20	0.20	0.04	25.62	46
		Gya	.....	.....	.....	.....	0.06	.....	.....	1	0.06	0.06	0.13	50.05	46
SOUTH BHAR.	Patna	Nowadah	.....	.....	.....	.....	0.20	0.01	.....	2	0.21	0.21	0.12	33.08	46
		Jehanabad	.....	.....	.....	.....	0.13	.....	.....	1	0.13	0.13	?	34.49	46
		Arwah	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	36.09	46
SOUTH BHAR.	Patna	Daudnagar	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	26.29	46
		Sharnghati	.....	.....	.....	.....	0.01	.....	.....	1	0.01	0.01	?	17.04	46
		Mayauli	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	31.90	46
SOUTH BHAR.	Patna	Pakri-Barawan	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	46
		Patna	.....	.....	.....	.....	0.04	.....	.....	1	0.04	0.04	0.04	51.66	46
		Dumapore	.....	.....	.....	.....	.....	.....	.....	1	0.19	0.19	0.10	41.29	46
SOUTH BHAR.	Monghyr	Behar	.....	.....	.....	.....	.....	0.19	.....	1	0.19	0.19	0.13	56.03	46
		Barh	.....	.....	.....	.....	0.30	.....	.....	1	0.30	0.30	?	41.45	46
		Buckram	.....	.....	.....	.....	0.20	.....	.....	1	0.20	0.20	?	38.64	46
SOUTH BHAR.	Monghyr	Hile	.....	.....	.....	.....	0.35	.....	.....	1	0.35	0.35	?	?	46
		Benomeral	.....	.....	.....	.....	0.05	.....	.....	1	0.05	0.05	0.09	47.74	46
		Manthyr	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.11	41.77	46
SOUTH BHAR.	South Bhaul-pore	Janai	.....	.....	.....	.....	0.10	.....	.....	1	0.10	0.10	0.12	39.54	46
		Gopri	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	34.19	46
		Sheikpura	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	43.31	46
SOUTH BHAR.	South Bhaul-pore	Shahpore	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.11	45.64	46
		Hatla	.....	.....	.....	.....	0.14	.....	.....	1	0.14	0.14	0.14	39.34	46
		Koipara	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	46.97	46
SOUTH BHAR.	South Per-gunnah.	Dangson	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	?	46
		Rajmehal	.....	.....	.....	.....	0.07	.....	.....	1	0.07	0.07	0.14	59.97	46
		Godda	.....	.....	.....	.....	0.30	.....	.....	1	0.30	0.30	0.30	40.34	46
SOUTH BHAR.	South Per-gunnah.	Pakur	.....	.....	.....	.....	0.13	.....	.....	1	0.13	0.13	0.12	73.74	46
		Nya Doomka	.....	.....	.....	.....	0.06	0.10	.....	2	0.16	0.16	0.12	56.95	46
		Doomur	.....	.....	.....	.....	0.24	0.13	.....	2	0.37	0.37	0.22	40.77	46
SOUTH BHAR.	South Per-gunnah.	Jamtara	.....	.....	.....	.....	0.10	0.35	.....	2	0.45	0.45	0.27	43.72	46
		Mahapama	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	24.41	46
		Nemhat	.....	.....	.....	.....	1.00	.....	.....	1	1.00	1.00	?	58.87	46
SOUTH BHAR.	Hamriah	Pachamba	.....	.....	.....	.....	0.11	0.06	.....	2	0.17	0.17	0.19	80.07	46
		(Guride)	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	0.14	40.10	46
		Hamriah	.....	.....	.....	.....	.....	.....	.....	1	0.24	0.24	0.30	30.48	46
SOUTH BHAR.	Hamriah	Semtagurah	.....	.....	.....	.....	0.24	.....	.....	1	0.24	0.24	0.17	?	46
		Mahudi Hills	.....	.....	.....	.....	.....	.....	.....	1	0.60	0.60	0.10	31.94	46
		Jhoomra Hills	.....	.....	.....	.....	.....	0.60	.....	1	0.60	0.60	?	44.74	46
SOUTH BHAR.	Hamriah	Barhi	.....	.....	.....	.....	0.25	0.24	.....	2	0.49	0.49	?	39.94	46
		Chatra	.....	.....	.....	.....	.....	.....	.....	2	0.69	0.69	?	?	46
		Karapdeha	.....	.....	.....	.....	.....	.....	.....	2	0.69	0.69	?	?	46
SOUTH BHAR.	Lohardugga	Ramgarh	.....	.....	.....	.....	.....	.....	.....	2	0.69	0.69	?	?	46
		Lohardugga	.....	0.13	.....	0.41	.....	0.53	.....	3	1.09	1.09	0.04	46.31	46
		Ranchi	.....	0.30	.....	0.12	0.87	0.54	.....	4	1.83	1.83	0.30	57.44	46
SOUTH BHAR.	Lohardugga	Palamow	.....	.....	.....	0.42	0.22	.....	.....	2	0.64	0.64	0.11	34.80	46
		Silli	.....	.....	.....	.....	.....	.....	.....	2	0.64	0.64	?	?	46
		Balumar	.....	.....	.....	0.08	0.01	.....	.....	2	0.08	0.08	?	?	46
SOUTH BHAR.	Singbhoom	Hosainabad	.....	.....	.....	.....	0.29	.....	.....	1	0.29	0.29	?	44.00	46
		Gerwah	.....	.....	.....	0.45	.....	.....	.....	1	0.45	0.45	?	29.42	46
		Chyebasm	.....	0.10	.....	.....	.....	.....	.....	1	0.10	0.10	0.27	44.80	46
SOUTH BHAR.	Singbhoom	Chakradhar-pore	.....	0.15	.....	.....	.....	.....	.....	1	0.15	0.15	?	60.03	46
		Ghatella	.....	.....	.....	.....	.....	.....	.....	?	?	?	?	?	46
		Baharapora	.....	.....	.....	.....	.....	.....	.....	?	?	?	?	?	46
SOUTH BHAR.	Manbhoom	Purulia	.....	0.04	.....	0.03	.....	0.20	.....	2	0.24	0.24	0.28	43.90	46
		Gobindpore	.....	.....	.....	.....	.....	0.53	.....	1	0.53	0.53	0.17	33.72	46
		Kaghunah-pore	.....	.....	.....	.....	.....	.....	.....	NH	NH	NH	?	43.91	46
SOUTH BHAR.	Manbhoom	Barrabhoom	.....	.....	.....	0.16	.....	.....	.....	1	0.16	0.16	?	44.46	46
		Jhaida	.....	.....	.....	.....	.....	.....	.....	?	?	?	?	?	46
		Chas	.....	.....	.....	0.07	0.25	.....	.....	2	0.40	0.40	?	55.98	46

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the returns are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 11th March 1890.

**SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 7TH
OF MARCH 1890.**

On March 1st, or the first day of the present week, the pressure changes over Bengal were of a decidedly variable nature, for a considerable rise had occurred over the whole of North Behar and part of North Bengal, while pressure was falling elsewhere; the fall, too, was by distinctly irregular amounts, showing that conditions were becoming a little disturbed. Over the southern half of the province on this day winds were southerly, at some of the northern stations they were northerly, while at some of the central stations decidedly irregular winds prevailed. The changes of temperature were also marked, a rapid fall taking place in all districts except Behar and Chutia Nagpur, where, on the other hand, there was a decided increase of temperature. These conditions were apparently sufficiently abnormal to produce a small series of nor'-westers, and several stations in South-West Bengal and the neighbouring districts reported rain on the morning of the 2nd. A rapid rise of pressure also took place on the 2nd, the increase averaging about six or seven-hundredths of an inch, and pressure became rather largely above the normal. On this day also an exceedingly rapid rise of temperature took place, the rise at several stations exceeding 7°. Wind directions became rather more westerly at the southern and more easterly at the northern stations, but the local storms practically ceased. On the 3rd there was a local fall of pressure over Orissa and part of South-West Bengal, but elsewhere pressure continued to rise moderately. On this day also a very rapid fall of temperature set in over the greater part of the province except in the extreme west, the fall in many cases ranging from 4° to 6°; the westerly element in the wind directions also rather strengthened, and though conditions on this day continued a little disturbed, there were practically no local storms. On the 4th the pressure changes were smaller than they had been for some days, though of a distinctly variable nature, and again rather large and variable temperature changes were reported. On the 4th there had also been a very decided change in the wind directions, and winds over the southern half of the province were blowing from almost opposite directions from those over the northern half of the province, damp southerly and south-westerly winds blowing at the southern and more or less northerly winds at the northern stations. This apparently at once set up disturbed conditions over the province and produced a series of local storms with rain, and on the morning of the 5th, rain was reported from almost all stations in Behar, while numerous local falls occurred in North Bengal, South-West Bengal, East Bengal, and Chutia Nagpur. On the 5th there had been a rather rapid fall of pressure over the greater part of the province, accompanied by a complete change in the wind systems blowing over the province, and on this day north-westerly winds were generally reported. A few local storms, however, again occurred on the evening of the 5th, and rain was reported on the morning of the 6th at several stations in South-West Bengal, South Behar, and Chutia Nagpur. The northerly wind current had again been driven back by the morning of the 6th, when westerly and south-westerly winds generally prevailed, but the pressure changes on this day were small, though there had been an extremely rapid fall of temperature, the fall ranging up to nearly 9° at some stations. On the 7th, pressure continued to fall moderately to rapidly, but temperature, on the other hand, began to increase. Winds were also generally more or less westerly over the whole province. During the last two days, however, conditions were more settled than they had been, and practically no local storms occurred. It will therefore be seen that the meteorological changes during the week have been of a rather large and rapid description, particularly in the matter of temperature. The conditions during the week have also been rather more important than for some weeks past, from the fact that light rain has been fairly general over the whole province, and in South Behar and Chutia Nagpur in particular considerable amounts of rain have been received.

Pressure.—The mean pressure has been above the normal in all districts, the excess usually ranging from about four to seven-hundredths of an inch. This excess pressure has been also fairly equally distributed over the whole province.

Temperature.—The changes of temperature during the week have been very rapid, but the mean average temperature has been slightly below the normal, the defect for the whole province equalling about 0·7°. The largest defects have been registered in North Behar and Chutia Nagpur, where they equal from one to two degrees. The highest maximum temperature registered during the week was 96·4° at Cuttack on the 2nd and 6th instants.

The actual temperatures during the week, the range from day to night, and their variation from their normal values, are seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts of the province

are given, together with their normal values. It will be seen that the day temperatures have been very distinctly in defect, while the night or minimum temperatures have been almost normal :—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 7th March 1890.

	Normal mean maximum temperature for the week ending 7th March.	Actual mean maximum temperature for the week ending 7th March 1890.	Variation of actual mean from the normal.	Normal mean minimum temperature for the week ending 7th March.	Actual mean minimum temperature for the week ending 7th March 1890.	Variation of actual mean from the normal.	Normal mean daily temperature for the week ending 7th March.	Actual mean daily temperature for the week ending 7th March 1890.	Variation of actual mean from the normal.
Cuttack	84.8	83.8	-1.0	70.3	70.5	+0.2	82.5	82.1	-0.4
Calcutta	84.0	84.1	+0.1	61.4	61.4	0.0	77.7	76.4	-1.3
Barrackpore	84.4	84.0	-0.4	65.3	64.8	-0.5	76.8	75.7	-1.1
Burdwan	80.8	80.4	-0.4	64.9	64.9	0.0	77.5	77.3	-0.2
Patna	85.7	85.3	-0.4	69.1	69.6	+0.5	78.5	78.0	-0.5
Gya	83.3	83.8	+0.5	62.4	62.0	-0.4	76.1	74.3	-1.8
Patna	85.6	86.1	+0.5	67.5	65.3	-2.2	78.0	76.0	-2.0
Barrackpore	85.0	85.3	+0.3	60.0	59.8	-0.2	75.5	74.1	-1.4
Darjeeling	83.9	83.8	-0.1	65.3	66.6	+1.3	69.1	68.4	-0.7

Rainfall—Has occurred in every district of the province; the falls have been very small in Orissa, East Bengal, and South Bengal, where they only average a few hundredths of an inch. They have been rather larger in South-West Bengal and North Behar, where they average a tenth of an inch. In South Behar the falls have been decidedly more general and heavier than in the other districts mentioned, and they average a fifth of an inch, the falls being generally largest in the Shahabad district. The largest falls have occurred in Chutia Nagpur, which has received an average amount of 0.57 inch, and in this division the falls have been heaviest in the Lohardugga and Manbhoom districts.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the province for the week ending Friday, the 7th of March 1890 :—

METEOROLOGICAL DIVISIONS.	TEMPERATURE						RAINFALL.							
	Highest observed during week.		Lowest observed during week.		Average for week.		Of week.		Rainy days.		Since 1st of month.		Since 15th May 1889.	
	Of highest of each day.	Of lowest of each day.	Of mean for each day.	Average mean of week above or below normal mean of week.	Average.	Normal average.	Variation.	Average number in week.	Normal average number in week.	Variation.	Average.	Normal average.	Average.	Normal average.
Orissa	86.4	61.6	80.7	78.3	-0.6	0.6	0.13	-0.14	0.3	0.6	-0.3	0.05	0.19	0.20
South-West Bengal	84.3	64.3	80.7	78.9	-0.4	0.10	0.08	-0.02	0.6	0.7	-0.1	0.10	0.20	0.20
East Bengal	81.1	61.5	68.6	64.7	75.3	+0.2	0.04	0.02	0.2	1.0	-0.8	0.04	0.08	0.08
North Bengal	80.1	64.6	68.7	67.8	71.8	-0.6	0.08	0.20	-0.17	0.4	0.5	-0.1	0.03	0.20
North Behar	87.3	60.0	83.3	78.3	69.6	-2.0	0.10	0.14	-0.04	0.3	0.5	+0.6	0.10	0.14
South Behar	81.4	65.3	65.2	61.2	73.3	-0.2	0.20	0.34	+0.14	1.2	0.4	+0.8	0.20	0.10
Chutia Nagpur	87.8	67.0	83.1	80.4	79.8	-1.6	0.57	0.60	+0.03	1.3	0.6	+0.7	0.30	0.05

• Durbanee and Chyabasse not included.

METEOROLOGICAL OFFICE, BENGAL;
The 11th March 1890.

A. PEDLER,
Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from
2nd to 8th March 1890.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1890.		°		Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
March	2nd	137.8	0.7	29.956	75.9	88.6	12.7	68.3	68.6	0.602	64.2	68	NNW and variable	121	0.03	Chiefly cloudy, o, d.
"	3rd	140.5	9.1	961	75.8	87.5	23.7	63.8	69.4	634	65.7	73	SSW and SW by W	66	Nil	Partially cloudy, d, =.
"	4th	144.0	5.8	963	78.3	88.7	10.4	68.9	70.8	656	66.7	70	SW by W, SW and SSW.	99	"	Chiefly cloudy, d, =.
"	5th	141.5	5.0	961	76.8	84.5	14.3	70.2	67.8	561	62.2	62	W by S and variable	101	"	Chiefly cloudy.
"	6th	142.4	9.4	959	76.6	85.5	18.9	66.6	66.9	531	60.6	60	NNW and WNW ...	95	"	Partially cloudy.
"	7th	143.5	6.5	962	75.9	85.9	20.3	65.6	65.5	496	58.7	59	WSW and WNW ...	59	"	Chiefly cloudy, d, =.
"	8th	140.5	7.0	898	75.9	88.6	25.3	63.3	68.6	602	64.2	68	SSW and SW ...	123	"	Partially cloudy d.

The mean pressure of the seven days ... 29.939
 The average pressure of the corresponding period for 24 years, S.-G.'s Office ... 29.845

The total number of hours of bright sunshine ... 44.4
 The maximum possible number of hours of sunshine ... 82.2

The mean temperature of the seven days ... 76.5
 The average temperature of the corresponding period for 24 years, S.-G.'s Office ... 77.9
 The extreme variation of temperature ... 25.4
 The maximum temperature ... 88.7

The highest velocity of the wind in one hour ... 13

The highest pressure of wind on one square foot ... Not measurable.

The mean relative humidity ... 66

The average relative humidity of the corresponding period for 24 years, S.-G.'s Office ... 68

The total fall of rain from 2nd to 8th March 1890 ... 0.03

The average fall of the corresponding period for 24 years, S.-G.'s Office ... 0.69

The total fall from 1st January to 8th March 1890 ... 0.80

The average fall of the corresponding period for 24 years, S.-G.'s Office ... 2.18

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h, 10h, 16h, and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified, and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o overcast, d drizzling rain, d, dew, = fog.

Q. LITTLE,

For Meteorological Reporter to the Govt. of India.

METEOROLOGICAL OFFICE, GOVT. OF INDIA;

Calcutta, the 10th March 1890.

MEMORANDUM.

THE chief incidents in connection with the vital statistics of the principal Municipalities in Bengal for the week ending 22nd February 1890, are the following:—

1. The ratio of births during the period above mentioned stood at 20.6, and that of deaths at 22.2 per 1,000 of population, the record of the preceding week ending 15th February presenting 21.7 and 24.1 per 1,000, respectively, indicating a diminution in the registration of both the events.

2. The highest proportions of births and deaths were returned from the following Municipalities:—

Births.			Deaths.		
		Ratio per mille.			Ratio per mille.
Rampore Beaulah	...	47.3	Poori	...	119.6
Durbhanga	...	38.5	Comillah	...	69.0
Serampore	...	35.3	Jessore	...	42.8
Comillah	...	34.7	Gya	...	40.3
			Serampore	...	35.3

3. In comparison with the results of the preceding week, there were no marked differences in the casualty-rates from any of the diseases specified in the table appended to this memorandum—*vide* figures given below:—

		Ratio per mille during the weeks ending—	
		22nd February 1890.	15th February 1890.
Cholera	...	2.6	3.1
Small-pox	...	1.1	.8
Fever	...	9.1	9.1
Bowel-complaints	...	2.0	3.4
Injury	...	.2	.5
Other causes	...	6.3	7.2

4. Of the death-causes named above, cholera, fever, bowel-complaints and the maladies coming under the head of "Other causes" proved conspicuously fatal in the following Municipalities, and small-pox continued to rage with virulence only in the Poori town, yielding a death-rate of as much as 35.6 per 1,000 of population:—

Cholera.	Fever.	Bowel-complaints.	Other causes.
Ratio per mille.	Ratio per mille.	Ratio per mille.	Ratio per mille.
Poori ... 25.2	Jessore ... 42.8	Serampore ... 13.7	Poori ... 20.4
Comillah ... 19.3	Comillah ... 22.1	Poori ... 12.6	Serampore ... 16.7
Narainganj ... 16.8			Bhagulpore ... 14.5
Gya ... 7.6			Gya ... 11.6
Monghyr ... 8.6			
Howrah ... 3.4			
Durbhanga ... 3.1			

5. The death-rates under the heads of Sex, Class and Age stood as follows:—

According to Sex.		According to Class.		According to Age.	
	Ratio per mille.		Ratio per mille.		Ratio per mille.
Males ...	24.6	Christians ...	14.9	Under 1 year	120.1
Females ...	19.7	Hindus ...	23.3	1 and under 5 years	24.1
Ratio of male deaths to every 100 female deaths, calculated on the proportion such mortality bears to the total male and female population ...	125	Mahomedans ...	19.8	5 " 10 "	9.9
				10 " 15 "	8.6
				15 " 20 "	12.8
				20 " 30 "	15.0
				30 " 40 "	16.9
				40 " 50 "	18.3
				50 " 60 "	20.2
				60 years and upwards	71.2

W. H. GREGG, Dip. Publ. Health, Camb.,

Sanitary Commissioner for Bengal.

The 10th March 1890.

[illegible]

		MORTALITY ACCORDING TO—										Age.													
DISTRICTS.	NAMES OF MUNICIPALITIES.	Class.						Deaths.										Ratio per 1,000 of Population per Annum.							
		Deaths among—																							
		Christians.	Hindus.	Buddhists.	Other classes.	Ratio per 1,000 of Population per Annum.		Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 years and up.	Under 1 year.	1 and under 5 years.	5 and under 10 years.	10 and under 15 years.	15 and under 20 years.	20 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 years and up.
Burdwan	Burdwan	12	7	...	...	263	353	1	1	1	1	1	1	1	1	1	79	22	180	171	...	...	...	...	...
Midnapore	Midnapore	6	3	...	...	100	164	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hughli	Hughli and Chinsai	15	5	...	...	257	169	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Barrackpore	Barrackpore	14	1	...	...	271	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Howrah	Howrah	1	10	...	...	54	253	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Medinipur	Medinipur	3	3	...	...	116	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jessore	Jessore	6	4	...	...	161	281	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rajshahi	Rajshahi	2	1	...	...	161	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darjiling	Darjiling	3	3	...	...	105	371	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dacca	Dacca	15	10	...	...	232	195	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittagong	Chittagong	4	1	...	...	289	54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tripura	Tripura	4	10	...	...	350	704	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paisa	Paisa	25	9	...	...	101	114	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gya	Gya	20	7	...	...	451	220	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sahabul	Sahabul	8	1	...	...	54	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meerut	Meerut	7	3	...	...	121	83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Burhanpur	Burhanpur	25	11	...	...	256	328	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Baran	Baran	9	3	...	...	118	121	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bharatpur	Bharatpur	26	8	...	...	214	261	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meerut	Meerut	16	3	...	...	186	154	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Farrukh	Farrukh	3	4	...	...	170	207	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poori	Poori	24	1	...	...	1187	276	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	Total	1	240	112	...	163	273	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

W. H. GREGG, Dip. Publ. Health, Camb.

PUBLIC WORKS DEPARTMENT,—BENGAL.
IRRIGATION BRANCH.

IRRIGATION OPERATIONS FOR THE OFFICIAL YEAR 1889-90.
Areas leased for irrigation up to the end of December 1889.

Circle.	District.	Canal.	DETAILS OF AREAS LEASED.										Rainfall, 1889-90.		REMARKS.			
			Estimated full discharge.	Average discharge in month.	Discharge utilized.	Approximate area of land irrigated during the year up to the end of the month.	Approximate area of land under irrigation up to the same date last year.	Annual leases.					Grand Total.	Rainfall, 1889-90.				
								Five years, all crops.	Five years, kharif.	Kharif.	Rabi.	Furrow.				Bhadra.	Hot-weather.	Total.
Oudha	Cuttack	Talunda, 1st reach 1876, 2nd "	1,302 500	10,163	9,822	Acres.	10,683	Acres.	354	Acres.	12	Acres.	...	10,879	Inches.	69.44
		Machirang	776	27,748	27,021	...	27,718	...	225	...	16	27,954	...	48.34
		Kendrapara	1,047	48,690	47,815	...	51,370	...	3,653	...	36	55,060	...	48.49
		Godan	373	1,717	1,717	...	2,131	...	215	...	3	2,349	...	37.02
		do, extension	645	1,809	1,809	...	2,000	...	7	2,007	...	71.19
Bihar	Patna	High level, Range I	608	7,608	7,608	...	10,335	...	812	10,888	No gauge fixed.	46.53
		ditto, Range II	237	19,331	19,331	...	19,331	...	608	...	3	19,968	...	38.45
		ditto, Range III	757	35,719	35,719	...	36,000	...	61	36,061	...	31.12
		Total	154,113	150,723	...	150,629	...	2,895	...	156	156,682
		Total of the corresponding period of last year	61,782	49,779	...	115,012	...	2,728	...	171	115,860
SOUTH-WESTERN.	Midnapore	Midnapore	1,411	56	...	61,782	49,779	...	60,928	...	11	...	...	...	60,939	...	61.38
		Pandikoorah	522	11	...	3,463	4,619	...	4,388	...	427	...	...	...	4,815	...	65.42
		Tidal reaches, Range I-II	...	...	...	157	269	...	318	...	...	...	...	...	318	...	...
		Total	...	...	...	65,502	54,777	...	65,634	...	645	...	...	...	66,112	...	...
		Total of the corresponding period of last year	...	...	...	...	...	...	27,072	...	1,174	...	...	...	28,246	...	30 days discharging, 3 days discharging.
Sons	Shahabad	Western Main	4,342	1,483	...	20,189	20,010	...	20,010	...	2,671	...	129	...	21,131	...	39.73	
		Upper	1,291	249	...	77,006	80,649	...	81,241	...	1,833	...	939	...	83,074	...	37.07	
		Lower	2,050	1,234	...	138,012	138,124	...	140,000	...	1,000	...	2,000	...	142,000	...	41.83	
		Total	...	...	...	69,083	62,335	...	69,083	...	3,334	...	307	...	72,417	...	...
		Total of the corresponding period of last year	...	...	...	220,650	329,711	...	329,711	...	12,815	...	4,754	...	138,011	...	...
Sons	Patna and Gaya	Grand Total	...	...	...	510,232	624,211	...	624,211	...	19,166	...	4,890	...	140,230	...	...
		Grand Total of the corresponding period of last year	...	...	...	...	...	...	104,011	...	47,983	...	3,157	...	155,151	...	...
		Grand Total of the corresponding period of last year	...	...	...	...	...	...	104,011	...	47,983	...	3,157	...	155,151	...	...
		Grand Total of the corresponding period of last year	...	...	...	...	...	...	104,011	...	47,983	...	3,157	...	155,151	...	...
		Grand Total of the corresponding period of last year	...	...	...	...	...	...	104,011	...	47,983	...	3,157	...	155,151	...	...

Calcutta,
The 10th March 1890.

G. A. G. SHAW,
Under-Secy. to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 8th March 1890, as compared with the corresponding week of the previous year.

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 8TH MARCH 1890.			WEEK ENDING SATURDAY, THE 9TH MARCH 1889.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy ...	1,586	3,30,800	5,550	888	2,30,550	4,020
Jute ...	140	80,150	1,400	78	57,200	1,005
Firewood ...	128	71,685	082	130	51,785	720
Other articles ...	1,084	2,79,400	4,887	1,106	2,88,540	4,527
Total ...	2,898	7,62,131	12,269	2,302	6,27,075	10,273

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 1st March 1890, on 1,525½ miles open

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	258,321*	2,03,099 1 0	20,00,291 10	6,31,001 1 0	21,180 14 0	10,00,070 0 0	66,247	98,034	164,281
Or per mile of railway ...		132 10 10	...	440 0 1	13 14 3	655 9 2	...	...	...
For previous 8 weeks of half-year ...	2,000,012	22,06,305 13 0	1,09,27,130 10	45,04,093 12 0	1,54,924 11 0	70,15,594 4 0	514,723	660,145	1,204,868
Total for 9 weeks ...	2,258,333	24,09,304 14 0	1,29,27,421 20	51,35,084 13 0	1,76,514 9 0	80,16,073 4 0	580,970	758,280	1,339,250
COMPARISON.									
Total for corresponding week of previous year ...	2,08,464	3,15,068 5 9	28,30,501 10	6,30,220 2 0	16,910 2 11	10,00,127 10 5	67,540	97,762	165,302
Per mile of railway corresponding week of previous year ...	...	255 5 7	...	413 2 1	11 1 4	650 8 5	...	...	...
Total to corresponding date of previous year ...	2,293,442	26,69,070 2 1	1,49,49,117 0	54,18,183 4 0	1,36,306 4 2	82,43,103 10 3	542,902	663,590	1,206,492

* The decrease in coaching traffic is due to earnings for the corresponding period of 1889 having included receipts on account of "Shikha Ratta" mail.

Approximate Statement of gross receipts of the East Indian Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 2ND MARCH 1890.			RECEIPTS FOR WEEK ENDING 1ST MARCH 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 2ND MARCH 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 1ST MARCH 1890.			Total increase in 1890.	Total decrease in 1890.
Mean mileage worked.	Receipts.	Per mile worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.		
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
1,525½	10,00,128	660	1,525½	10,00,070	654	1,525½	4,07,82,891	657	1,525½	4,05,32,150	654	...	2,50,733

PATNA-GYA STATE RAILWAY

Approximate Return of Traffic for week ended 1st March 1890, on 57½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	12,345	Rs. A. P. 5,301 13 0	Mds. 5. 20,735 0	Rs. A. P. 2,534 15 0	Rs. A. P. 43 11 0	Rs. A. P. 8,070 7 0	1,800	630	2,430
Per mile of railway	210	111 8 6	362 10	41 13 0	0 12 5	139 13 3	.....	.....	.....
For previous 5 weeks of half-year	90,709	52,779 9 0	2,78,744 0	18,630 9 0	352 9 0	71,701 11 0	13,500	5,192	18,692
Total for 9 weeks	100,115	59,141 8 0	3,15,479 0	21,104 8 0	425 4 0	84,672 2 0	15,400	5,822	21,222
COMPARISON.									
Total for corresponding week of previous year	10,491	9,497 2 0	21,795 30	1,592 1 0	58 5 9	11,147 8 9	1,900	400	2,300
Per mile of railway corresponding week of previous year	208	166 0 0	433 20	27 13 4	1 0 4	104 14 2	.....	.....	.....
Total to corresponding date of previous year	115,707	62,714 1 8	2,80,815 20	16,732 2 0	334 14 9	79,781 2 5	16,700	4,962	21,662

Approximate Statement of gross receipts of the Patna-Gya State Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 2ND MARCH 1890.			RECEIPTS FOR WEEK ENDING 1st MARCH 1890.			TOTAL RECEIPTS FROM 1st APRIL 1888 TO 2nd MARCH 1890.			TOTAL RECEIPTS FROM 1st APRIL 1889 TO 1st MARCH 1890.			Total increase in 1890.	Total decrease in 1890.
Mean passenger worked.	Receipts.	Per mile worked.	Mean passenger worked.	Receipts.	Per mile worked.	Mean passenger worked.	Total receipts.	Per mile worked.	Mean passenger worked.	Total receipts.	Per mile worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
11,149	195	571	8,970	157	571	4,47,540	103	571	4,62,764	100		15,224	.....

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 1st March 1890, on 22½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week	20,030	Rs. A. P. 5,159 12 0	Mds. 5. 10,684 30	Rs. A. P. 597 12 0	Rs. A. P. 7 0 0	Rs. A. P. 5,734 8 0	874	222	1,096
Per mile of railway	887	231 0 0	478 10	26 0 8	0 5 0	257 12 8	.....	.....	.....
For previous 5 weeks of half-year	182,625	40,212 15 0	1,03,248 0	5,574 2 0	55 1 0	45,842 2 0	8,007	605	7,602
Total for 9 weeks	182,625	45,754 11 0	1,10,932 30	4,161 14 0	62 1 0	49,970 10 0	7,871	757	8,628
COMPARISON.									
Total for corresponding week of previous year	35,705	10,140 13 0	11,150 20	406 15 0	0 2 0	10,553 14 0	1,103	70	1,173
Per mile of railway corresponding week of previous year	.....	455 12 3	.....	18 4 8	0 4 0	374 5 4	.....	.....	.....
Total to corresponding date of previous year	190,408	51,000 0 0	85,603 20	3,062 12 0	58 3 0	54,001 0 0	8,107	583	8,690

Approximate Statement of gross receipts of the Tarkessur Branch Railway, prepared in accordance with Public Works Department Circular No. XXI, Railway, dated 23rd July 1883.

RECEIPTS FOR WEEK ENDING 2ND MARCH 1890.			RECEIPTS FOR WEEK ENDING 1st MARCH 1890.			TOTAL RECEIPTS FROM 1st APRIL 1888 TO 2nd MARCH 1890.			TOTAL RECEIPTS FROM 1st APRIL 1889 TO 1st MARCH 1890.			Total increase in 1890.	Total decrease in 1890.
Mean passenger worked.	Receipts.	Per mile worked.	Mean passenger worked.	Receipts.	Per mile worked.	Mean passenger worked.	Total receipts.	Per mile worked.	Mean passenger worked.	Total receipts.	Per mile worked.	Rs.	Rs.
Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.
10,554	474	221	5,755	258	251	2,60,943	241	221	2,53,250	237	.....	7,693	.....

EASTERN BENGAL STATE RAILWAY.

(INCLUDING N. B., DACCA, K. AND D., AND ASSAM-BEHAR SECTIONS.)

Approximate Return of Traffic for week ended 22nd February 1890, on 747 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated), including steam-boat.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	141,530	79,740 0 0	5,65,320 0	99,150 0 0	15,570 0 0	1,91,420 0 0	23,173	20,578	43,751
Or per mile of railway ...	189	107 0 0	761 0	133 0 0	*1 0 0	241 0 0	...	...	...
For previous 7 weeks of half-year ...	1,000,160	5,34,570 0 0	41,44,080 0	8,70,110 0 0	1,10,600 0 0	10,24,340 0 0	151,411	226,940	378,351
Total for 8 weeks ...	1,201,610	6,14,310 0 0	47,15,370 0	9,69,260 0 0	1,32,380 0 0	17,15,800 0 0	174,584	248,515	423,099
COMPARISON.									
Total for corresponding week of previous year ...	1,154,634	1,11,659 0 0	5,24,035 0	80,832 0 0	17,520 0 0	2,10,320 0 0	32,460	23,625	56,085
Per mile of railway corresponding period of previous year ...	230	100 0 0	770 0	120 0 0	*1 0 0	267 0 0	...	...	...
Total to corresponding date of previous year ...	1,141,890	6,26,397 0 0	35,55,220 0	7,40,482 0 0	1,28,871 0 0	10,01,840 0 0	170,620	205,554	376,174

* Excluding steamer earnings.

a Due to Mohotahob at Nohodip and development of fish traffic.

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Eastern Bengal State Railway.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
673	2,10,320	312	747	1,91,420	256	673	97,43,740	306	747	*1,04,80,950	307	7,37,131	...

* Audited up to week ending 31st December 1889.

BENGAL CENTRAL RAILWAY.

Approximate Return of Traffic for week ended 22nd February 1890, on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	26,850	9,580 0 0	61,080 0	3,640 0 0	80 0 0	13,280 0 0	3,736	1,050	4,786
Or per mile of railway ...	215	79 0 0	490 0	28 0 0	1 0 0	104 0 0	...	...	...
For previous 7 weeks of half-year ...	180,200	70,670 0 0	2,12,860 0	18,570 0 0	220 0 0	89,660 0 0	24,550	12,754	37,304
Total for 8 weeks ...	213,150	80,450 0 0	2,73,940 0	22,180 0 0	220 0 0	1,03,180 0 0	28,286	14,804	43,090
COMPARISON.									
Total for corresponding week of previous year ...	28,614	12,150 0 0	62,765 0	2,070 0 0	33 0 0	15,153 0 0	3,763	1,937	5,700
Per mile of railway corresponding period of previous year ...	229	97 0 0	502 0	24 0 0	...	121 0 0	...	...	...
Total to corresponding date of previous year ...	215,060	77,313 0 0	2,99,867 0	16,247 0 0	3,850 0 0	1,00,319 0 0	26,800	14,949	41,749

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Bengal Central Railway.

RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1889.			RECEIPTS FOR WEEK ENDING 22ND FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 22ND FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
125	13,280	121	125	13,280	106	125	6,40,474	110	125	*6,62,631	113	16,157	...

* Audited up to week ending 31st December 1889.

DACCA STATE RAILWAY.

Approximate Return of Traffic for week ended 22nd February 1890, on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	10,500	Rs. A. P. 7,880 0 0	Mds. B. 23,600 0	Rs. A. P. 2,810 0 0	Rs. A. P. 100 0 0	Rs. A. P. 10,190 0 0	2,440	704	3,144
Or per mile of railway ...	123	67 0 0	274 0	27 0 0	2 0 0	116 0 0	...	...	...
For previous 7 weeks of half-year ...	100,000	41,120 0 0	2,00,000 0	21,000 0 0	1,300 0 0	63,520 0 0	16,920	5,704	22,624
Total for 8 weeks ...	120,500	48,960 0 0	2,23,600 0	23,800 0 0	1,600 0 0	73,560 0 0	18,770	6,408	25,178
COMPARISON.									
Total for corresponding period of previous year ...	15,870	5,345 0 0	11,000 0	573 0 0	130 0 0	6,948 0 0	2,400	879	3,279
Per mile of railway corresponding period of previous year ...	181	62 0 0	130 0	10 0 0	2 0 0	74 0 0	...	...	...
Total to corresponding date of previous year ...	110,001	36,020 0 0	22,000 0	6,000 0 0	1,300 0 0	47,685 0 0	19,160	5,101	24,261

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Dacca State Railway.

RECEIPTS FOR WEEK ENDING 23RD FEBRUARY 1890.			RECEIPTS FOR WEEK ENDING 23RD FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 23RD FEBRUARY 1890.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 23RD FEBRUARY 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
86	6,948	74	86	10,020	116	86	2,77,302	67	86	2,88,838	80	9,476	...

* Audited up to week ending 31st December 1889.

NALHATI STATE RAILWAY.

Approximate Return of Traffic for the week ending 1st March 1890, on 27½ miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	3,000	Rs. A. P. 1,948 0 0	Mds. B. 13,244 0	Rs. A. P. 706 0 0	Rs. A. P. 33 0 0	Rs. A. P. 2,079 0 0	509	254	763
Or per mile of railway ...	130	40 0 0	480 0	29 0 0	1 0 0	70 0 0	...	...	...
For previous 7 weeks of half-year ...	24,000	8,998 0 0	1,02,042 0	6,037 0 0	380 0 0	15,415 0 0	3,854	3,964	7,818
Total for 8 weeks ...	27,000	10,146 0 0	1,15,286 0	7,352 0 0	413 0 0	17,401 0 0	4,363	4,218	8,581
COMPARISON.									
Total for corresponding week of previous year ...	4,000	1,631 0 0	10,334 0	575 0 0	20 0 0	2,226 0 0	509	672	681
Per mile of railway corresponding week of previous year ...	171	60 0 0	370 0	21 0 0	1 0 0	62 0 0	...	...	...
Total to corresponding date of previous year ...	20,000	11,105 0 0	1,31,494 0	7,321 0 0	151 0 0	18,627 0 0	4,435	4,746	9,181

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Nalhati State Railway.

RECEIPTS FOR WEEK ENDING 1st March 1890.			RECEIPTS FOR WEEK ENDING 1st March 1890.			TOTAL RECEIPTS FROM 1st APRIL 1889 TO 1st MARCH 1890.			TOTAL RECEIPTS FROM 1st APRIL 1889 TO 1st MARCH 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.		
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
27½	2,233	80	27½	2,070	76	27½	93,908	75	27½	93,002	73	34	...

TIRHOOT STATE RAILWAY.

Approximate Return of Traffic for the week ending 1st March 1890, on 273 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. c.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week	47,510	18,044 0 0	2,84,477 0	81,204 0 0	8,614 0 0	83,486 0 0	5,024	9,421	14,445
Or per mile of railway	175	66 0 0	1,037 0	298 0 0	31 0 0	305 0 0	.....	.....	.....
For previous 7 weeks of half-year	375,640	1,63,706 0 0	20,39,254 0	2,81,234 0 0	81,084 0 0	4,29,024 0 0	43,653	73,916	117,569
Total for 8 weeks	423,150	1,81,750 0 0	21,23,731 0	3,62,468 0 0	89,698 0 0	4,82,190 0 0	48,677	83,337	132,014
COMPARISON.									
Total for corresponding week of previous year	40,707	15,190 0 0	1,88,103 0	13,788 0 0	2,697 0 0	31,371 0 0	5,541	6,879	12,420
Per mile of railway corresponding week of previous year	149	55 0 0	688 0	49 0 0	1 0 0	105 0 0	.....	.....	.....
Total to corresponding date of previous year	355,888	1,68,140 0 0	12,12,904 0	1,18,308 0 0	27,152 0 0	2,70,583 0 0	40,220	50,093	90,313

* Steam-boat earnings excluded in calculating "Total earnings per mile of Railway."

FINANCIAL YEAR.

Approximate Statement of gross receipts of the Tirhoot State Railway.

RECEIPTS FOR WEEK ENDING 2ND MARCH 1890.			RECEIPTS FOR WEEK ENDING 1ST MARCH 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1888 TO 2ND MARCH 1889.			TOTAL RECEIPTS FROM 1ST APRIL 1889 TO 1ST MARCH 1890.			Total increase in 1889-90.	Total decrease in 1889-90.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Mean mileage worked.	Total receipts.	Per mile worked per week.	Rs.	Rs.
	Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		Rs.	Rs.		
273	81,371	115	273	53,456	196	265'38	13,25,066	125	273	19,00,416	157	4,41,880	.....



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MARCH 19, 1890.

OFFICIAL PAPERS.

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., Cap. 67.

THE Council met at the Council Chamber on Saturday, the 1st March, 1890.

Present:

The HON'BLE SIR STEUART COLVIN BAYLEY, K.C.S.I., C.I.E., Lieutenant-Governor of Bengal, *presiding*.

The HON'BLE SIR CHARLES PAUL, K.C.I.E., *Advocate-General*.

The HON'BLE F. B. PEACOCK.

The HON'BLE P. NOLAN.

The HON'BLE T. T. ALLEN.

The HON'BLE SIR HENRY HARRISON, K.T.

The HON'BLE SIR ALFRED CROFT, K.C.I.E.

The HON'BLE DR. MAHENDRA LAL SIRCAR, C.I.E.

The HON'BLE C. H. MOORE.

The HON'BLE H. PRATT.

The HON'BLE SHAHZADA MAHOMMED FURROKH SHAH.

The HON'BLE DR. RASH BEHARY GHOSE.

CALCUTTA PORT BILL.

The Hon'ble SIR HENRY HARRISON moved that the clauses of the Bill to consolidate and amend the law relating to the Port of Calcutta, and to the appointment of Commissioners for the said Port, be further considered, for settlement in the form recommended by the Select Committee.

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved for leave to withdraw the motion which he had laid before the Council at the last meeting, namely, that the following proviso be added to section 96 of the Bill:—

'Provided that any order made and published under this section which shall have the effect of rendering it unlawful to land or ship any goods out of, or into, any wharf, quay, stage, jetty or pier made by any private person for the convenience of private traffic shall entitle the owner thereof to sue for compensation, and to recover the same compensation, if any, that he would have been entitled to sue for and recover had the wharf, quay, stage, jetty or pier been removed, filled up, or destroyed under the provisions of section eighty-five.'

He said:—"As the discussion will take place on the wording of the new clause on the notice paper, I shall say very little in asking His Honour the President to put this motion to the Council. Following the course of the last discussion, and acting also upon a concession made by my hon'ble friend Mr. Moore, I ask leave to withdraw the amendment then proposed, in order to embody in a revised amendment the concession which has been made as well as a suggestion thrown out by the hon'ble and learned Advocate-General. For this reason, it would be better if the former amendment be allowed to be withdrawn, and the opinion of the Council taken upon the revised amendment."

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON then moved that, in line 14 of section 96 of the Bill, after the word 'way' the words 'and with the same sanction' be inserted.

He said:—"This amendment is hardly more than a formal one. At present, orders under section 96 can only be passed under the authority of the Government; but the Government having once passed an order declaring a wharf open, it is left to the Port Commissioners to pass the subsequent order prohibiting the use of any other wharf. There seems to be no objection to accept the wish of the Chamber of Commerce, that the same sanction be required for closing a wharf as is required for declaring a wharf open."

The Motion was put and agreed to.

The Hon'ble SIR HENRY HARRISON also moved that, between sections 96 and 97 of the Bill, the following section be inserted:—

'96A. Whenever any order made and published under sections ninety-four and ninety-six shall have the effect of rendering it unlawful to land or ship any goods out of, or into, any vessel at any wharf, quay, stage, jetty or pier lawfully made, erected, or fixed by any person for the convenience of private traffic, or to which a prescriptive right may have been acquired by possession of sixty years or upwards, such person, his representatives or assigns, shall be entitled to institute a civil suit for the award of compensation to him for the injury caused by the order hereinbefore mentioned:

'Provided that, in awarding such compensation, the Court shall not take into consideration any tolls, dues, rates or charges which the aforesaid person claiming compensation shall be liable to pay for using the wharf, quay, stage, jetty or pier provided by the Commissioners for public use:

'Provided also that it shall be lawful for the Commissioners, in lieu of closing any wharf, quay, stage, jetty or pier under either of the said sections, to allow the continued use thereof on payment of such scale of tolls, dues, rates and charges as may be agreed upon between the owner thereof and the Commissioners.'

He said:—"This amendment is in the form of a new section to be inserted at the end of section 96. First, I should say that the right to institute a suit for the award of compensation is now proposed to be applied to section 94 as well as to section 96. The only reason why the section was not originally proposed in that form was, that the persons who put forward the objection to section 96 did

not extend their objection to section 94; and, naturally enough, the proposal took the form in which the objection was made by those who pressed it.

"In the wording of the earlier part of the new section, it has been deemed advisable to follow more closely the wording of the amendment to section 85, which the Council have accepted.

"In our last meeting, the Hon'ble Mr. Moore, on behalf of those whom he represents, stated that the objection to charging the owners of wharves fees or rates, and not giving them compensation for any fees which they may be, in the future, bound to pay, would be abandoned. I assume that some members of this Council would entertain serious objections to any possibility of compensation being given for future fees; and it is, therefore, desirable to avail ourselves of that concession, and to formally embody in the new section a proviso to the effect that, the Court is not to take into consideration any tolls, dues, rates or charges which the owner of the wharf, pier or jetty would become liable to pay in consequence of the closure of the wharf. It is, on the other hand, obviously intended that all other legal injury which such person may suffer should be taken into consideration.

"Again, the learned Advocate-General pointed out at our last meeting that the very best way of dealing with these wharves or jetties in general would be not to destroy or close them, but to allow them to be used on payment of a sufficient sum in lieu of the tolls, dues and charges to be paid for the use of the wharves or jetties of the Commissioners. I have ascertained that the only reason why the Port Commissioners have not followed this course is, because they thought they had not the power to do so, and that it is the course they would prefer to follow; that is to say, if a private jetty comes in competition with the working of one of their wharves, they would prefer, instead of closing it, to say—here is your own wharf which you have constructed along with the necessary appliances, and therefore you ought to pay us something less than what we are entitled to charge for the use of wharves erected by us and the appliances provided by us. At the same time, as the tolls charged on jetties are not solely on account of the mere work of landing, but also in part defray the general expenses which, as trustees of the Port, we must incur to maintain the Port and the river in a navigable condition, therefore it is not fair that you should use your jetties free of all payment of tolls. So far from the Port Commissioners raising any objection to this proposal, I find that they consider it the very best and most convenient way of dealing with the matter. I therefore propose to enact clearly in the new section that, the payment of tolls in such cases may be a matter of agreement between the two parties.

"Obviously, we might have gone further and have made it obligatory on the Port Commissioners to do this, and I am not aware that the Commissioners would raise any violent objection to its being made obligatory; but there are some difficulties in the way of this, and practically the Port Trust will be very willing to work on this system: and as by the constitution of the new Commission the Chamber of Commerce will be largely represented, I think we may fairly rely on the reason and good sense of the Commissioners to work the section in a satisfactory and harmonious manner. I should therefore prefer framing the section in this optional manner.

"As regards the general form of the amendment, after thinking over all the objections which have been raised, I think the Council may, without any unreasonable apprehension as regards the consequences, adopt this amendment. The Port Commissioners themselves are unanimously in favour of going at least as far as this: many of them would be disposed to go further. The question was brought up at the last meeting of the Commissioners, and I am authorised to say that they are unanimously in favour of the section as far as it goes, though all do not think that it goes far enough, and have no grounds to apprehend any inconvenience resulting therefrom. I do not say that the Legislature is bound, in a matter of this kind, to follow the opinion of the Port Commissioners; they are bound to think for themselves, and to insert in this law what they think right and proper in every respect. Still, though it is our duty to think for ourselves and not to adopt anything which we think wrong in principle, we cannot but allow weight to the fact that those most intimately concerned in the matter see no grounds to anticipate danger to their finances.

"Again, if the provisions of section 106 of the Bill are borne in mind, I think the Council will consider that there can be no practical danger of injury to the interests of the Port. By that section the Government has power, in the event of the income of the Port being insufficient, to require the Commissioners to introduce a scale of tolls on all goods landed anywhere in the port over and above what is charged on goods landed or shipped at any dock, wharf, &c., belonging to the Commissioners. So that in case of any deficiency arising in the income of the Port Trust, there is reserved a power, which never has been exercised, and, I believe, never will be, of imposing an additional scale of duties on all goods landed or shipped, whether on private wharves or on the Commissioners' wharves, or at the ship's sides in boats, or on the banks of the river. With such a power, I do not think it is possible to suppose that, the financial security of the Port can be jeopardised by passing a section such as is now proposed.

"It should, however, be pointed out to the Commissioners that if they exercise the power vested in them by the last clause of the amendment, they must be careful at the same time to make it clear in the agreement with the owner of the private wharf that, in the event of the Government exercising the power conferred upon it by section 106 of requiring tolls to be paid on *all* goods, the owner of the wharf will have to pay such tolls in addition to the rate agreed to be paid to the Commissioners for permitting the use of the wharf. Inasmuch as it is in the hands of the Commissioners in framing the agreement to secure the future payment of tolls under section 106 in addition to the rates agreed upon, it only requires due care on the part of the Commissioners, and it is unnecessary to propose any amendment upon section 106. I therefore move the amendment to section 96."

The Hon'ble MR. ALLEN said:—"The section which has now come before the Council proceeds on the assumption of the right of the Port Commissioners to a monopoly of the tolls, and is entirely free from the objection which appeared to me to militate against the amendment proposed on the last occasion; and to that extent I have no possible objection to it. But, as I said on a former occasion, to my mind the whole amendment is void of any practical importance under present conditions, and I have therefore had considerable doubt whether I ought to make any remark on the present amendment. I entertain the same opinion as I did before, as to the unlikelihood of its ever being brought into operation. But even as a piece of theoretical fancy legislation, it appears to me that if I allow the Council to remain in ignorance of the objections of a legal nature which appear to me to arise, I shall be wanting in the duty expected from my office. And therefore I shall say a few words on the matter.

"A suggestion was thrown out by the hon'ble member on my left (Mr. Nolan) on the last occasion that, if the restriction, imposed under section 96 of the Bill, is to entitle the owner of a private wharf to receive compensation for the loss he sustains in respect of inland traffic, there is no reason why owners of wharves for sea-borne traffic should not be compensated when subjected to the similar restriction under section 94. It appears to me that the gentlemen who brought forward this objection have entirely forgotten the existence of a law, which makes an essential difference between sea-borne traffic and inland traffic. The proposal has a sort of superficial plausibility about it; but on referring to the Sea Customs Act, I think this plausibility will disappear.

"It may be roughly said that, every person who has water frontage is entitled to use his land for the purpose of loading and unloading vessels and boats which are engaged in the inland trade within the country, and to deprive him of that right, is to prevent him from utilising his land to the best advantage. Can that be said with reference to sea-borne traffic? Certainly not. In India, and in every civilised country which possesses a Custom House, the whole coast is surrounded by a legal wall, and the owner of land on the seashore who attempts to use his land for the purpose of landing or shipping seaborne goods, exposes himself under section 167, Act VIII, 1878, to a fine of Rs. 1,000 for every such attempt, and the confiscation of his goods. A man may own 100 miles of the sea frontage and not be able to use a single yard for this purpose. This at once marks a difference between seaborne and inland traffic. It is only

within an established port that seaborne goods can be landed. The ports are the gates in that legal wall—the only legitimate entrance through which foreign goods may be brought into the country.

“But even within the port itself, ownership of a river frontage gives no right to establish a wharf. The establishment of wharves for seaborne goods is in the Local Government. Section 11 of Act VIII of 1878 provides that, the Local Government may, from time to time, declare the limits of their ports, appoint proper places therein to be wharves for landing and shipping of goods, &c.; while section 73 forbids the landing of goods at any place other than a wharf duly appointed.

“It therefore appears that the only legitimate places within a port at which seaborne goods can be landed are, wharves which the Government has appointed; and, consequently, there can be no such right in any one to be compensated for a restrictive order under section 94, as there might be for a restriction imposed under section 96: and it was no doubt the knowledge of this essential difference, and not mere inadvertence, that caused the memorial of the commercial gentlemen to omit all allusion to section 94 and confine their claim to the restriction of section 96. Section 94 says that, when a sufficient number of docks, wharves, &c., shall have been erected for the landing and shipment of goods of all sea-going vessels resorting to the port, an order may be passed that, without the express sanction of the Commissioners, no goods shall be landed or shipped from any sea-going vessel within the port, save at such wharves, &c.; that is, a general order may be passed applicable to all ships.

“But section 92 makes a similar provision for a special order to each particular ship. It says:—It shall be lawful for the Commissioners to require the Conservator of the port from time to time when there shall be room at such dock, wharf, &c., to order to come alongside of such dock, &c., for the purpose of being laden or unladen any sea-going vessel which shall not have commenced to discharge or take in goods. If section 94 is to be put into this amendment, why not section 92? Section 92 enables you to issue a particular order against any particular ship, and section 94 provides for the issue of a general order regarding all ships. They are exactly on the same footing. A series of special orders to each ship as it arrives will have the same result, as a general order to all ships. If the amendment proposed entails any consequences to evade it, all the Commissioners have to do is, in each case to take particular action under section 92. I think, therefore, that we should either omit the reference to section 94, or section 92 should be added in this amendment. If this last be done, what will the position be? Shall the Port Commissioners, whenever they issue orders to bring a ship to their wharf under section 92, be obliged in each case to send round to the persons who own private wharves, if any such there be, and settle with each man the proportion he shall receive as compensation with respect to his particular wharf or jetty for the ship thus withdrawn from the public wharf? It would be much wiser to limit the amendment, so as to apply only to restrictions issued under section 96.

“Then comes another point, namely, that inasmuch as the private right to tolls is given up and the structure is to be allowed to stand, what is there remaining to compensate? The first two paragraphs of the section seem practically reduced to a nullity, and the only part of this proposed section that can operate will be the last paragraph. If the amending section is cut down to that, I have no objection. I should go farther, and am prepared to say that, any person having a private wharf shall be entitled to continue to use it on paying the tolls to which goods landed at the public wharves are liable.”

The Hon'ble MR. NOLAN said:—“I had not intended to say anything upon the present motion, as it was discussed at some length in another form at our last meeting; but, perhaps, I may be expected to make some reply to what has fallen from the last speaker as to the injustice of giving compensation to the owners of wharves for sea-going vessels. We all gladly recognise the propriety of the course adopted by the hon'ble member who is also the Remembrancer for Legal Affairs, in indicating objections founded on the existing law; and, in this instance, I only regret that he did not raise the point at an earlier period of the discussion, when we were engaged in examining section 85 of the Bill, which makes no distinction between wharves for

sea-going and wharves for river vessels. In the present instance, he states that river-frontage carries with it, *prima facie*, the right to land goods brought from the interior, and deprivation of this right may properly be the subject of compensation; but that no one has any right, under the Sea Customs Act, to land sea-borne goods except at places specified under section 85 of that Act, and that, therefore, there can be no right to compensation. As far as I can make out, the section quoted, applies equally to landing from river vessels. The hon'ble member intimates dissent from this view, and no doubt he is better informed; but the matter is of little consequence, inasmuch as wharves for inland trade, whether they can be closed under the Indian Customs Tariff Act or not, can undoubtedly be closed under the Port Commissioners' Act, 1870. They are thus held on sufferance precisely as are the wharves for sea-going vessels, and no real distinction exists. In both cases the use of the river bank is subject to such conditions as the Legislature may, from time to time, impose.

"It is true that we should not give compensation for a wharf to a person who, under the Sea Customs Act, has no title to use it, and that is not proposed; but we are considering the case of those who have been, or may hereafter be, allowed under that Act to establish wharves, and in regard to them, there is no reason why they should be refused compensation for real loss occasioned by the orders of the Port Commissioners. Calcutta is not only a place of trade, but also a manufacturing town; and at many of the factories, it is really necessary that goods should be landed. These may come, as jute commonly does, by river, or as coal, by sea; in either case, it is often convenient to effect the landing on the premises. I see no reason why the wharves legally appointed under the Sea Customs Act for landing coal should be refused protection because the town is a port, and therefore a place in which it is of special importance that all commercial interests should be jealously guarded."

The Hon'ble Mr. Moore said:—"I support this amendment, but I have no further arguments to adduce in regard to it. As, however, I sincerely trust this will be the last opportunity I shall have of making a speech regarding the Port Bill, I am anxious to correct one or two errors that have arisen in the course of the discussion. The first was a slight one made by the Hon'ble Sir Charles Paul, in stating that I merely represented a small class of interested individuals, and not the commercial community at large; whereas I have been speaking on behalf of the Chamber of Commerce through its Committee, which is specially elected to include the whole community of commerce, and the memorial of the Chamber was unanimously adopted by that Committee. It is not only certain jute mills and such industries which are concerned and interested, and this is shown by the memorials submitted by other bodies and private persons, such as Mr. John Stalkart. On some occasions, however, I do find difficulty in defining whether I am speaking for myself only or for those I represent, and it arises in the Hon'ble Sir Henry Harrison's remarks regarding the concession made by the Chamber in withdrawing any claim under this section to compensation for payment of future tolls, &c. Now, as a matter of fact, I never specially put this point to the Chamber, but holding the opinion myself that such compensation should not be included, I never intended in the original amendment I drew that it should appear, and so was quite willing that a distinct provision debarring it should be made; but I may add this, that though I did not specially obtain the opinion of the Chamber on the subject, I may, I think, guarantee that they will support the action that I have taken.

"In regard to the Hon'ble Mr. Allen's suggestion, that the final clause in the amendment under discussion should be made more binding, I think it might be imposing an inconvenient restriction on the Commissioners; and that, therefore, it had better be left in its present optional form than made obligatory.

"There is a very prevalent error abroad that, the enactment of this Bill and the special attention paid to sections 85 and 96, heralds a concerted plan to attack all down the line, and carry by assault every bit of private property on the banks of the Hooghly from the Jubilee Bridge to Diamond Harbour. Of course it is known to this Council, but it is well it should be thoroughly understood outside, that the Bill was merely introduced to consolidate, for convenience sake, the various Bills governing the port; and proof that the impression mentioned is devoid of foundation is found in the fact that, had the

Commissioners or Government contemplated such a thing, they would have done it under the old Act which gives them full powers, and before a re-enactment took place, which in all possibility, (if not a certainty) might be changed as it has been to modify those powers.

"In conclusion, I wish to correct another error. It has in many quarters been thought that over these sections the Government has been distinctly obstructive, and in opposition to the views and principles held by commercial people on the commercial aspect of the question. I am very glad to publicly state that this is not my experience in the close connection I have had with this long discussion; and to acknowledge that, on the contrary, conciliation, which the Hon'ble Sir Henry Harrison recently claimed had been shown, is a correct description of the attitude Government has taken up in the matter. The error probably arises from the long delay that has preceded its settlement, which is easily explained. The views of those personally interested are naturally uppermost in their minds, but it takes long to engraft new views on the minds of others who, like Government officials, are not personally interested; and it would plainly not be right for these latter to hastily accept principles impressed upon them before being convinced that they are correct. That the desire to meet those interested has been shown, is testified to in the many modifications made in the sections under allusion by the member in charge of the Bill, each of which nearly has followed representations made and points urged from my side of the question, culminating in the final amendment now before us, which I hope will be carried and close this long debate."

The Hon'ble DR. RASH BEHARY GHOSE said:—"I also support the amendment which has been proposed, and in doing so, I am bound to say that I am unable to accept a great deal of what has fallen from the Hon'ble Mr. Allen. The right of a riparian owner of using his property as a wharf for the loading and unloading of his goods has been recognised as a very valuable kind of private property. The question was elaborately discussed in the well-known case of *Lyon versus the Fishmongers Company*. The whole matter was there thoroughly discussed and the House of Lords came unanimously to the conclusion—and they are not always unanimous—that the right of a riparian owner to access to the river is a private right, and when it is interfered with, compensation ought to be given to the injured owner. The question was also discussed in a very recent case which came before the Privy Council on appeal, and their lordships were of opinion that, according to the French law which prevails in Lower Canada, a riparian owner has the same rights as the House of Lords in the case of *Lyon versus the Fishmongers Company* decided that such an owner had under English law. That being the French and the English law on the subject, we may take it for granted that, there can be no question of the existence of such rights.

"But it is said by the Hon'ble Mr. Allen, that the Sea Customs Act says nothing about any compensation. I have not had time to examine the Customs Act, but all I can say in answer to the objection founded on the absence of any clause for compensation is, that if it is not there it ought to be there. It is the old old argument that, you are now going to give compensation to private owners for the first time, although the Legislature has refused to recognise any such right ever since the year 1866, when power was given to the Justices of the Peace to take away private property without giving any compensation to the owner.

"It was said by the Hon'ble Mr. Allen on the last occasion that, in refusing to give any compensation, we are only following the lines on which the Indian Legislature has proceeded in other cases. Now, I confess, I should be extremely sorry to think that our Legislature has proceeded on a different basis from that on which all civilized Legislatures during the present century have proceeded in these matters. [Mr. Allen:—"My argument was, that legislation had taken place before the wharves came into existence; they were subject to that legislation."] I beg the hon'ble member's pardon if I have misunderstood him. I was referring to what the hon'ble member said with regard to private ferries. Unless I am very much mistaken, it was said by the Hon'ble Mr. Allen that when the Government established a public ferry, although it might be done to the injury of the owner of a neighbouring private ferry, he was not entitled to any compensation. Now, turning to the present Ferries Act, I of

1885, section 17, I find it says—'Claims for compensation for any loss sustained by any person in consequence of a private ferry being taken possession of, or a new public ferry or subsidiary ferry, being established under section 6 or section 11, shall be enquired into by the Magistrate of the district in which such ferry is situated, who shall, with the approval of the Commissioner, award compensation to any person who may appear justly entitled thereto.' Then the section goes on to prescribe the mode in which compensation should be settled in such cases.

"It has been said that if compensation is given to persons who may be affected by the exercise of the power which is conferred on the Commissioners by section 94, we ought also to give compensation in the cases referred to in section 92. Now my answer to that objection is this, that section 92 does not directly affect any private property. It may be said, and it has been said, that although section 92 does not directly affect private property, it may indirectly do so. But the answer to that is, that the law does not allow compensation when the injury for which compensation is claimed is too remote. You can only give compensation where the injury is directly caused by the exercise of a particular power. It would open a very wide door, indeed, to all manner of claims for compensation if it was to be given for any injury, however indirect, however remote, which might be caused by the doing of a particular act. I accept the amendment which has been moved by the Hon'ble Sir Henry Harrison, because, I think, it embodies a principle to which, I think, no real exception can be taken; and it is certainly, as has been already pointed out, not open to the objections taken to the previous amendment.

"Before I sit down, I must beg to say a few words on some remarks which I know have been made with regard to the present measure. The Hon'ble Mr. Moore has told us of the somewhat unnecessary alarm which the appearance of this Bill created in the mercantile community; but the way in which their representations have been met, ought to satisfy them that their fears were groundless. But our attitude of conciliation has, I regret, given rise to some hostile criticism. It has been said in certain quarters that, we have weakly yielded to the clamour of an interested party. Now that is, we all know, only a rhetorical mode of saying we do not approve of your action. But what do these gentlemen really mean by saying, that we have weakly yielded to the clamour of an interested faction? Do they mean to say that when persons come before us with a grievance and represent that grievance to us, we should tell them we cannot listen to you, because you represent an interested party? You must send some person who has no interest in the matter to represent your grievance to us.

"Then, about the clamour. Do these gentlemen mean to say that, when persons with a grievance come before us, they should be told to speak with bated breath and whispering humbleness that they have no right to appeal to the public press in a spirit of fairness, or to go to counsel for opinion as to their own rights? Surely, we cannot do anything of the kind.

"Then, as regards our too weakly yielding to clamour. Do our critics mean to say that, although we may be satisfied that a grievance really exists, we must not make any concession because it would be weakly yielding to those who complain of the grievance? Well, if to concede what one believes according to his lights to be right and proper is weakness, I must confess that I share that weakness. And I do not at all envy the man who would not do what is shown or proved to be right, simply because it would be yielding or conceding what he was not at first prepared to concede. The question, therefore, is one simply of principle; and as I understand the matter, we are now generally agreed that, the owner of property who may be injured by the exercise of the powers conferred by this Act is entitled to compensation. Partial evil may possibly be universal good, but it will be small comfort to a private owner whose property is taken away to be told that, what is lost by him is gained by the public.

"On this point, I shall venture to read a passage from the Judgment of Lord Bramwell in the *Hammersmith and City Railway Company versus Brand*, which, I think, is very much to the point. The noble and learned lord says:—

'It is said that the railway and the working of it are for the public benefit, and therefore the damage must be done and be uncompensated. Admitting that the damage must be

done for the public benefit, that is no reason why it should be uncompensated. It is to be remembered that that compensation comes from the public which gets the benefit. It comes directly from those who do the damage, but ultimately from the public in the fares they pay. If the fares will not pay for this damage and a fair profit on the Company's capital, the speculation is a losing one, as all the gain does not pay all the loss and leave a fair profit. Either, therefore, the railway ought not to be made, or the damage may well be paid for. But further, though if it were the law and practice to do individuals a damage for the benefit of the public without compensation, no one in particular could complain when it happened to him, as everyone would know that he held his property subject to being deprived of it or having it injured when it suited the public; still such a law and practice would be highly inconvenient and mischievous.

"But I have another and perhaps still higher authority. One of the greatest names in English jurisprudence, Jeremy Bentham, who, I believe, was the first to preach the gospel of Beccaria in England, and who cannot be suspected of any predilection for private rights when they come into competition with public rights in his theory of legislation; in speaking of the suppression of pensions and places without indemnity to the possessors, says:—

'The interest of individuals, it is said, ought to yield to the public interest. But what does that mean? Is not one individual as much a part of the public as another? This public interest which you introduce as a person is only an abstract term, but it represents nothing but the mass of individual interests. It is necessary to take them all into account, instead of considering some as all and the others as nothing. If it is a good thing to sacrifice the fortune of one individual to augment that of others, it will be yet better to sacrifice a second, a third, a hundred, a thousand, an unlimited number; for whatever may be the number of those you have sacrificed, you will always have the same reason to add one more. In one word, the interest of everybody is sacred, or the interest of nobody.'

"Then, he says:—

'Individual interests are the only real interests. Take care of the individuals; never molest them, never suffer any one to molest them, and you will have done enough for the public.'

"I refer to these authorities because a principle which one would have thought would never be seriously disputed, has been hotly disputed—if not by any of the hon'ble members here, at least by a portion of the outside public—and that is my only apology for troubling the Council with these authorities."

The Hon'ble SIR CHARLES PAUL said:—"As all parties are more or less agreed on this present amendment I do not propose to prolong the discussion. I shall only say a very few words. I believe there is a distinction between the cases falling under section 94 and the cases falling under section 96, as pointed out by the Hon'ble Mr. Allen. But I do not think that, assuming there is a distinction between the sections, his objections dispose of the matter under consideration. The amendment proposed is, that if any order under section 94 affects a private person, he shall be entitled to compensation. If it be supposed that an order of this kind has no effect, it follows there will be no compensation. I think that is a sufficient answer to that objection.

"The Hon'ble Mr. Moore corrected me of an error into which, he says, I fell on the last occasion. If I committed an error I am glad to be corrected; but I must say in self-defence that I did not intend to deny, question, or restrict the extensive representation which is centred in himself. But what I did say was, that in reference to compensation under section 96, the claim to compensation was being urged by the Hon'ble Mr. Moore, representing a very small number of people, namely, those who had jetties and wharves on the river banks for landing goods for their own purposes. That is all I intended to say. I am quite aware that he represents a very large section of the community, and it would not be fair of me to say anything derogatory of the high position which he fills in this Council. I am glad that he thinks we have arrived at a result which is entirely satisfactory to him and to those whom he represents. That must be a consolation also to other members of Council on this occasion. I think it eminently satisfactory that the labours of this Council have resulted in reducing propositions which embraced,

what I may call for want of a better word, lawless elements into one or more propositions composed of lawful conditions."

The Hon'ble SIR HENRY HARRISON said in reply:—"As regards the necessity of applying the new section 96A to section 94, the Hon'ble Sir Charles Paul has just said, in far better language than I could have done, precisely what I wanted to say, namely, that although the Hon'ble Mr. Allen's argument is valid to a certain extent, it is not sufficiently valid to make it right and proper to exclude section 94. As regards section 92, I think an insufficient case has been made out, because that is the section under which the Commissioners can make a particular order with regard to a particular vessel when it has not commenced discharging cargo, and it is obviously for the purpose of regulating the traffic. It is obviously proper for the Commissioners to say we are now ready for a particular ship, and it must be brought to our jetty and not taken to a private jetty to which it might have otherwise gone. That is very different from saying, that for all time the use of your jetty is closed.

"As regards making the last clause of the section obligatory, I have considered the matter carefully, and I think it would be inconvenient to do so. If we had done so, the owner would have had to pay the full tolls, which in some cases would be more than the Commissioners would wish him to do. They would wish to charge something less than the ordinary amount of tolls to compensate the owner for having put up the jetty, and using his own appliances and labour; and, therefore, it would not be fair to ask from him the same amount of tolls which would be paid by others who used the Commissioners' wharves and jetties.

"In conclusion, I must thank the Hon'ble Mr. Moore for what he has been so good to say, as regards the attitude of the Council in dealing with this matter. It is very discouraging to see that such extraordinary misapprehensions can gather force, especially when, as in this instance, the community which, we are informed labours under this misapprehension, is undoubtedly one of the most intelligent communities in India. Is it conceivable that the Bengal Legislative Council could consciously be indifferent to one of the most important interests in the country? Knowing, as the Council does, that the entire welfare of Calcutta, and in a large measure the welfare of Bengal, is bound up with the success of its commerce and trade, is it possible that they should wish to inaugurate a régime of hostile legislation? Now that we apparently have arrived at a satisfactory conclusion, I am bound to say that it is in a great measure due to our singularly good fortune in having to deal with the gentleman who represents in this Council the interests of the commerce of the port, and who has known so well how to reconcile the duty he owes to the interests which he represents, with that courtesy and conciliatory attitude which make the work of those who have to treat with him so much easier than it might otherwise have been."

The Motion was put and agreed to.

SUSPENSION OF RULES.

The Hon'ble SIR HENRY HARRISON also applied to the President for the suspension of Rules.

He said:—"After the satisfactory result at which we have just arrived, I think I may fairly be permitted to ask Your Honour to allow the Rules to be suspended, for the purpose of passing this measure at this meeting of the Council. Although it is undoubtedly true that we have had three very important and useful discussions on one feature of the Bill, yet, I may say, on the one hand that, after the unanimous result which has been attained, so far as the discussion to-day is concerned, no one can say that we are proceeding with undue haste in giving it immediate effect by passing the Bill to-day; on the other hand, this measure, though a very large one, has, as regards all its other proposals and changes, received no opposition whatever. Under these circumstances, seeing that all the other features of the Bill have been accepted

without amendment, and that this one point has been thoroughly considered and a satisfactory conclusion has been unanimously arrived at, and that further delay will serve no beneficial purpose, I ask Your Honour to suspend the Rules in order that the Bill may be passed at once, instead of coming here next week in order to go through the formality of passing it."

The President having declared the Rules suspended—

The Hon'ble SIR HENRY HARRISON moved that the Bill, as settled in Council, be passed.

The Motion was put and agreed to.

The Council adjourned *sine die*.

CALCUTTA ;

The 7th March, 1890.

C. H. REILY,

Assistant Secretary to the Govt. of Bengal,
Legislative Department.

The 18th March, 1890.—The following is published for general information.

By order of the Lieutenant-Governor of Bengal,

P. NOLAN,

Secretary to the Government of Bengal.

EXHIBITION TO BE HELD IN JAMAICA IN THE YEAR 1891.

Extract from the Proceedings of the Government of India, Revenue and Agricultural Department (Museums and Exhibitions),—No. 239, dated Calcutta, the 5th March 1890.

THE following papers received from Her Majesty's Secretary of State for India relative to an Exhibition to be held in Jamaica in the year 1891 are published for general information:—

Industrial and Manufacturing Exhibition to be opened in Jamaica, January 1891.

COMMITTEE IN UNITED KINGDOM.

Honorary President:

THE RIGHT HON. THE LORD KNUTSFORD, G.C.M.G., &c., &c.

Chairman:

C. WASHINGTON EVES, Esq., F.R.G.S.

Committee:

HIS GRACE THE DUKE OF ST. ALBANS.
SIR HENRY BARKLEY, G.C.M.G., K.C.B.
SIR FREDERIC YOUNG, K.C.M.G.
SIR EDWARD NEWTON, K.C.M.G.
SIR J. R. SOMERS VINE, F.R.S.
MAJOR-GENERAL J. R. MANN, C.M.G.
SIR JOHN SIMON.
NEVILLE LUBBOCK, Esq.
ALEXANDER CRUM EWING, Esq.

RICHARD M. HARVEY, Esq., F.R.G.S.
D. MORRIS, Esq., M.A., F.L.S.
MAXWELL HALL, Esq., M.A., F.R.A.S.
DR. D. PALMER ROSS, F.R.S.E.
J. KENYON HAWTHORN, Esq.
W. C. C. PARK, Esq.
SAMUEL SHORTRIDGE, Esq.
WM. FAWCETT, Esq., B.Sc., F.L.S.
E. A. DE PAER, Esq.

The Exhibition, to be opened in January 1891, will be managed by a Commission, His Excellency the Governor being at the head. This Commission has already been constituted by a Colonial Law.

A Committee has been formed in London, representing Jamaica interests in the United Kingdom, to co-operate with the organizing body in Jamaica. The Committee as at present constituted is given above, the consent of Lord Knutsford to act as Honorary President being especially gratifying to all connected with the Colony. That the scheme has taken practical shape is proved by the fact that in the Colony alone over £16,000 has already been guaranteed out of a total of £20,000 required.

The exhibition will comprise specimens of all Jamaica products: Sugar of all qualities and its allied industry of Rum manufacture; Liqueurs, Cordials, &c.; Coffee; Oranges Pine Apples and Fruits of all kinds; Pimento, Cacao, Annatto; Woods in all degrees of preparation for use; Spices, Condiments, &c.; Fibres and Fibrous Material; Cinchona Bark, Oils, Essential Oils, Perfumes, &c.; Medicinal and Economic substances; Works of Art, Pictures, Fancy Articles and Ornamental Work; Horses, Cattle and Live Stock of all kinds. The Botany and Geology of the Island will also be fully illustrated.

There will also be exhibited specimens of goods imported into Jamaica from all countries.

It is hoped that all parts of the Empire will add to the interest and completeness of this exposition by sending specimens and ornamental trophies illustrative of their productions.

The attention of Merchants and Manufacturers in the United Kingdom is especially invited. English goods find a ready market in a Colony of nearly 650,000 people. It is also desired to show the advance of science in manufacturing tropical products. The Engineering Firms and Manufacturers of Machinery are requested to give their aid by exhibiting plans, drawings, models and specimens, so far as convenient, of actual machinery connected with such manufactures.

Shipowners are earnestly requested to co-operate by offering to take out specimens free of freight, and all who are interested in the commerce and productive prosperity of Jamaica are desired to give their help to an undertaking which must be beneficial to the Colony and all concerned in its fortunes.

As the Exhibition will be made as attractive as possible, the question of hotel accommodation for visitors from all parts of the British Empire, from the Continent of Europe and the United States and South America will be considered and details published in good time.

Communications and applications for forms and regulations to be addressed as early as possible to the Chairman, 1, Fen Court, London, E. C.

December 1889.

Regulations for the Jamaica Exhibition, 1891.

1. The Exhibition shall be one of Island Products, Manufactures and Works of Art, together with Exhibits of Works of Art, Machinery and Industrial and Agricultural Products from Great Britain and other Countries and Colonies.

2. The Exhibition shall be under the management and conduct of "The Jamaica Exhibition Commissioners" under Law 33 of 1889.

3. The Exhibition will be held in buildings to be erected for the purposes of the Exhibition on the grounds of "Quebec Lodge," conveniently situated on the northern boundary of the City of Kingston.

4. The Exhibition shall be opened on Tuesday, the 27th January 1891, and shall remain open for a period of not less than three months.

5. In order to secure uniformity of action there should be in each Country or Colony a Central Committee or a single Commissioner to act on behalf of the Exhibitors. Such Committee or Commissioner should perform the following functions:—

- (a) Distribute the Rules and Regulations Application Forms, &c., to those likely to become Exhibitors.
- (b) Receive the forms when filled up, the lists of articles for Exhibition, &c.
- (c) Communicate upon all matters directly with the Secretary of the Exhibition, and forward to him, from time to time, any applications for space.
- (d) When the Commissioners shall have decided how much space is available, it will be the duty of the Committee or Commissioner to divide it amongst the Exhibitors of such Country or Colony.

There should also be an Agent in Jamaica for each Country or Colony. The same person can, of course, act for more than one Country or Colony.

6. Any expenses, of whatsoever nature, connected with the representation of any Country or Colony not borne by the authorities of such Country or Colony must be defrayed by the Exhibitors themselves.

7. Applications for space must be made in the printed forms prepared by the Commissioners. These must be in the hands of the Secretary on or before the 1st May 1890.

8. The Secretary shall, before the 1st of July 1890, notify the decision of the Commissioners, and shall state what space, if any, has been allotted.

9. The reception of articles in the Exhibition Buildings shall commence on the 1st September 1890, and no articles shall be admitted after the 1st December 1890. Space assigned and not occupied on the 1st December 1890 shall revert to the Commissioners and shall be subject to re-assignment.

10. All Exhibits shall be arranged under some one of the following groups:—

Group I.—Raw Materials.

Group II.—Implements for obtaining Raw Materials.

Group III.—Machines and Processes used in preparing and making up the Raw Materials into Finished Products.

Group IV.—Manufactured Goods.

Group V.—Education.

Group VI.—Fine Arts, Literature and Science

Each of these groups is divided into classes, according to the system of general classification annexed to these Regulations (Appendix). This Appendix includes for each class a summary enumeration of the objects which it will comprise.

11. All packages from places in Jamaica containing goods intended for Exhibition must have placed on them the distinctive mark *Jamaica Exhibition*, as well as the name of the Exhibitor, and must contain a detailed list of contents.

12. Packages from Great Britain or other Countries or Colonies must likewise have painted on them the distinctive mark *Jamaica Exhibition*. They must be addressed to the Exhibitor himself or his private Agent, if any, or to the Agent, if any, of the Country or Colony from which they are sent. They must all be marked in such a way as to show distinctly the name of the Country or Colony from whence they come, and they must contain a detailed list of contents, a duplicate copy of which should be sent by post to the consignee.

13. Every object sent for Exhibition should be accompanied by a label stating the name and address of the Exhibitor and the number of the group to which it belongs.

14. Exhibitors outside Jamaica must provide, either personally or through Agents, for the despatch and transmission of their goods.

15. The Agents in Jamaica of the Countries or Colonies from which the Exhibits are sent are expected to provide for the reception, unpacking and, at the close of the Exhibition, the removal of the goods.

16. The Exhibits in Jamaica, except in the City of Kingston, shall be received by the Parochial Committees in the several parishes and shall be forwarded by them to the care of the Commissioners in Kingston, who shall arrange them in the Exhibition and return them to the Parochial Committees at the close of the Exhibition, if not otherwise disposed of. Exhibits in Kingston should be forwarded direct to the care of the Commissioners. Individual Exhibitors may however, if they prefer that course, either personally or through their own Agents, undertake the reception, unpacking, arrangement and final removal of their goods, subject to the control of the Commissioners.

17. Exhibitors shall not be required to pay rent for the space occupied by Exhibits not intended for sale during the Exhibition. Information as to the renting of space for the sale of goods may be obtained from the Secretary.

18. **EXHIBITION SPACES.**—The space granted to a Country or Colony within the Building is available for floor space, exclusive of passages for the public.

19. **SHOW CASES.**—No particular form or design is prescribed for cases, counters, platforms, &c., but they must not exceed the following heights without the special written permission of the Commissioners:—

Show cases and partitions	10 feet above floor.
Counters	3 do. do.
Platforms	1 foot do.

Such structures are to be erected by Exhibitors at their own cost.

20. Railings of a uniform height of 2 feet 6 inches above the floor level may be erected. In every instance the railings must be within the area of the space allotted.

21. The putting up of decorations and sign-boards and the display of printed or written bills shall be subject to any special arrangements made by the Commissioners.

22. Cases must be unpacked as fast as received, and the empty cases taken away by the Exhibitors or their Agents. No space will be reserved for empty cases.

23. No Exhibitor shall be allowed to transfer any allotment of space, or to allow any other than his own duly admitted Exhibits to be placed thereon, except by special permission.

24. Exhibitors should mark the selling price of articles intended for sale for the information of visitors.

25. Objects sold cannot be taken away before the close of the Exhibition without special permission. Special arrangements will be made with regard to perishable Exhibits.

26. Exhibitors of apparatus requiring the use of water, gas, or steam must state on applying for admission the quantity considered necessary. Those who wish to show machinery in motion must state the rate of speed at which the machine is to be driven. The furnishing of all countershafting pulleys, gas, water, steam, &c., must be at the entire expense of the Exhibitor, but under the direct control of the Commissioners or their appointed Officer.

27. Spirits or alcohol, oil, essences, corrosive substances, and generally all substances which might spoil other articles and inconvenience the public, can be received only in solid and suitable vessels of small size.

28. Percussion caps, fireworks, chemical matches, and other similar objects can be received only when made in imitation and deprived of inflammable ingredients.

29. Articles that are in any way dangerous or offensive shall not be admitted into the Exhibition.

30. No article exhibited may be photographed, drawn, copied, or reproduced, in any way whatsoever, without the special sanction of the Exhibitor.

31. Awards will be made by Committees specially appointed.

32. The Commissioners will not hold themselves responsible for any loss or damage occurring to any Exhibit from any cause whatsoever; but while declining any responsibility, it is the intention of the Commissioners to take such precautions as they deem necessary.

33. The Commissioners reserve the right to remove the objects belonging to any Exhibitor who shall not conform to the regulations.

34. Exhibits brought into Jamaica at any port of entry will be allowed to go forward to the Exhibition Buildings, under such arrangements for supervision by the Customs Officers as may be deemed proper, without examination at the port of entry, and at the close of the Exhibition will be allowed to go forward to the port from which they are to be exported. No duties will be levied upon such goods unless disposed of in Jamaica.

35. Immediately after the close of the Exhibition, Exhibitors whose Exhibits are not under charge of the Commissioners shall remove their effects and complete such removal within one month. Goods remaining after the expiry of the month will be removed by order of the Commissioners and sold for expenses, or otherwise disposed of under the direction of the Commissioners.

36. Each person who becomes an Exhibitor thereby acknowledges and undertakes to keep the Rules and Regulations established for the government of the Exhibition.

37. The Commissioners reserve the right to add to, alter, amend, or expunge any of the foregoing Regulations.

APPENDIX.

System of General Classification of Exhibits.

GROUP I.

Raw Materials.

Class 1. Raw Materials in the Mineral Kingdom:—

a.—Minerals.

b.—Ores.

c.—Phosphates and other Natural Manures.

d.—Rocks and their contained Fossils.

e.—Mineral Springs of Jamaica; their analysis and value.

Class 2. Raw Materials in the Vegetable Kingdom:—

a.—Foods.—Sugarcane, Cereals, Roots, Cacao, Kola.

b.—Fruits and Vegetables.—Bananas, Oranges, &c.

c.—Fibres.—Sisal Hemp, Manilla Hemp, Coconut, Cotton, Kamai.

d.—Timbers.

e.—Drugs.—Tobacco, Coca, Cinchona, &c.

f.—Condiments and Stimulants.—Coffee, Peppers, Ginger, Pimento, Rum.

g.—Dyes.—Logwood, Fustic, Annatto.

h.—Oils.—Castor Oil, Coconut Oil, Essential Oils.

i.—Ornamental Plants.

Class 3. Raw Materials in the *Animal* Kingdom :—

- | | |
|--|--|
| a.—Cattle and Horses, Sheep, Pigs, &c. | c.—Bees and Silkworms at work. |
| b.—Poultry, Birds, Fishes, Turtle, &c. | d.—Wool, Horn, Turtle-Shell, Corals, &c. |

GROUP II.

Implements for obtaining Raw Materials.

Class 4. Implements used in—

- | | |
|----------|------------------|
| Mining. | Extracting Ores. |
| Geology. | |

Class 5. Agricultural and Horticultural Implements.

Class 6. Fishing Implements. Guns and Hunting Equipments.

GROUP III.

Machines and Processes used in preparing and making up the Raw Materials into Finished Products.

Class 7. In the *Mineral* Kingdom :—

- | | |
|------------------------------|--|
| a.—Potter's Wheel, &c. | d.—Cutting and mounting Precious Stones. |
| b.—Glass blowing. | e.—Metal Work, Blacksmith's Work, &c. |
| c.—Making China, Firing, &c. | |

Class 8. In the *Vegetable* Kingdom :—

- | | |
|--|---|
| a.—Sugar-machinery, curing Cacao, making Arrowroot, Tapioca, Starch, Corn Shellers and Driers. | d.—Carpentry, Cabinet-making. |
| b.—Fruit Evaporators, packing Oranges, &c. | e.—Making Cigars and Cigarettes. |
| c.—Fibre-extracting, Rope-making, Mat-making, Hat and Basket-making, Weaving Cotton, Paper-making. | f.—Coffee-machinery, Rum-distilling. |
| | h.—Apparatus for expression and distillation of Oils. |

Class 9. In the *Animal* Kingdom :—

- | | |
|--|--|
| a.—Curing Meat and Fish. | d.—Cutting and preparing Tortoise Shell and Bones. |
| b.—Model Dairy, making Butter. | |
| c.—Preparing Silk and Wool and Weaving them. | |

GROUP IV.

Manufactured Goods.

Class 10. In the *Mineral* Kingdom :—

- | | |
|---|---|
| a.—Pottery, Glass, China. | d.—Apparatus for Heating and Lighting, Metal House-accessories. |
| b.—Jewellery. | e.—Steam-engines, Prime Motors. |
| c.—Sewing-Machines, Needles and other Apparatus for making up Clothing. | f.—Goldsmiths' and Silversmiths' work, Bronzes, Clocks and Watches. |

Class 11. In the *Vegetable* Kingdom :—

- | | |
|--|---|
| a.—Sugar, Chocolate, Starches, Bread and Pastry. | d.—Furniture, Wood-work, Farm Buildings, Model Dwellings. |
| b.—Preserves, Dried and Crystallized Fruit. | e.—Drugs. |
| c.—Thread, Cordage, Mats, Brushes, Paper, Textile Fabrics. | f.—Coffee, Rum, Pepper. |
| | g.—Dye-stuffs. |
| | h.—Oils. |

Class 12. In the *Animal* Kingdom :—

- | | |
|-------------------------|-----------------------------------|
| a.—Cured Meat and Fish. | e.—Woollen and Silk Goods. |
| b.—Dairy Produce. | d.—Leather, Horn, Bone Goods, &c. |

Class 13. Goods made up of Materials from more than one of the Groups 1, 2, 3.

GROUP V.

Education.

Class 14. Kinder-Garten Appliances.

Class 15. Industrial School Appliances.

Class 16. Organization, Methods, and Appliances for ordinary Education in Schools.

GROUP VI.

Fine Arts, Literature and Science.

Class 17. Fine Arts:—

- | | |
|------------------------------------|---------------|
| a.—Architecture. | c.—Sculpture. |
| b.—Painting, Drawing, Photography. | d.—Music. |

Class 18. Literature and Accessories:—

- | | |
|--|----------------------------|
| a.—Books, &c., on Jamaica and West Indies. | d.—Books, &c., on America. |
| b.—Books, &c., on British Isles. | e.—" General. |
| c.—" " British Colonies (exclusive of a). | f.—Book-binding. |
| | g.—Printing. |

Class 19. Science:—

- | | |
|--|--|
| a.—Maps and Charts of the West Indies. | b.—Engineering, Sanitation, Gas, Electricity, Astronomy. |
| | c.—Anthropology. |

Scheme of Arrangement of Classes.

I.	1	2	3
II.	4	5	6
III.	7	8	9
IV.	10	11	12
	13		
V.	14	15	16
VI.	17		19

JAMAICA EXHIBITION, 1891.

APPLICATION FOR SPACE.

Name in full, or name of Firm Business or Profession	
Address in full	
General nature of goods, specifying Groups in which it is proposed to exhibit. (For particulars see back.)	
Space applied for, subject to Rules and Regulations.	No. of Square Feet.
Signature	
Date	

As the allotment of space must depend upon the number of individual applications, it may be found necessary to give precedence to those made at an early date. It is therefore requested that this form may be forwarded before the 1st May 1890 to

LAURENCE R. FYFE, Esq.,

Secretary, Jamaica Exhibition,
Kingston, Jamaica.

On the allotment of space being officially notified, Exhibitors will be requested to furnish the necessary information for the Catalogue.

Intending Exhibitors are requested to mark under the Heads set apart for the purpose the Group or Groups in which they propose to exhibit, with such details as at the present date they are able to supply.

Full particulars will be found under the Appendix to the GENERAL REGULATIONS, "SYSTEM OF GENERAL CLASSIFICATION OF EXHIBITS."

GROUP I. Raw Materials.	
GROUP II. Implements for obtaining Raw Materials.	
GROUP III. Machines and Processes used in preparing and making up the Raw Materials into Finished Products.	
GROUP IV. Manufactured Goods.	
GROUP V. Education.	
GROUP VI. Fine Arts, Literature and Science.	

ORDERED that the foregoing papers be published in the Supplement to the

Madras.
Bombay.
Bengal.
North-Western Pro-
vinces and Oudh.
Punjab.

Central Provinces.
Burma.
Assam.
Coorg.
Hyderabad.
Ajmere-Merwara.

Gazette of India for general information, and that copies be forwarded to the Local Governments and Administrations noted on the margin, with a request that the Prospectus, &c., may be published in the local Gazette, and that such steps

may be taken to make it known amongst Merchants and Manufacturers as may be considered desirable.

(True extract)

E. C. BUCK,

Secretary to the Government of India.

**PROPOSAL FOR THE CONSTRUCTION OF WATER-WORKS AT
NASIRABAD FOR THE SUPPLY OF FILTERED WATER
TO THE INHABITANTS OF THE TOWN.**

MUNICIPAL DEPARTMENT—MUNICIPAL.

Calcutta, the 14th March 1890.

RESOLUTION.

READ—

▲ letter from the Commissioner of Dacca, No. 853T, dated 17th February 1890, with enclosures, and also previous correspondence on the subject of water-works at Nasirabad, the head-quarters of the Mymensingh district.

It appears from this correspondence that Rajah Surjya Kant Acharjya Bahadur of Mooktagacha, in the district of Mymensingh, promised to make a donation of Rs. 50,000 to the Municipality of Nasirabad, which is the head-quarters of the Mymensingh district, to perpetuate the memory of his wife by some work of public utility in the town. At a public meeting held in the town in April 1888 the question was discussed, and it was unanimously resolved that this donation should be devoted to the construction of water-works for the Municipality. The District Board of Mymensingh then decided to make a grant of Rs. 30,000 as a contribution from the public, but as the funds would still be insufficient to carry out the works on a proper scale, the Rajah came forward and doubled his donation, which now amounts to one lakh of rupees. The total sum available amounts therefore to Rs. 1,30,000.

2. The Lieutenant-Governor has been advised that there is no legal objection to the grant which has been sanctioned by the District Board. It has been pointed out by the Commissioner that the entire district of Mymensingh will benefit, more or less, if water-works be constructed in the head-quarters station; that persons coming to the town, on legal or other business, will directly benefit; and that if the result of the introduction of good drinking-water be, as at Dacca, to practically suppress cholera in the town, there will be one principal centre for the spread of disease removed from the district. The position of the Mymensingh Board is solvent. During the year 1888-89 it spent Rs. 90,583 on original public works and Rs. 20,669 on repairs, and the credit balance of the Board at the close of the year was Rs. 1,48,128. Under these circumstances, and looking to the importance of the scheme, the Lieutenant-Governor now accords his approval to the proposed grant.

3. The splendid donation of Rajah Surjya Kant Bahadur merits the warmest approbation of Government, and it affords the Lieutenant-Governor the very greatest pleasure to acknowledge his beneficent liberality. The Municipal Commissioners of Mymensingh have already resolved that the works should be called after his wife's name, the "Raj Rajeswari Water-works."

4. It has been estimated by the local authorities that the construction of the works can be completed within the limit of the sum of Rs. 1,30,000 available. The preparation of professional detailed plans and estimates should therefore be undertaken without loss of time, and instructions will be issued through the Public Works Department to the Inspector of Local Works to afford the Municipal Commissioners such advice and assistance as they may require. If necessary, a special officer will be placed on deputation for this purpose.

5. It is estimated that the cost of the maintenance of the water-works when completed will amount to at least Rs. 6,000 a year, and this sum the Municipality has resolved to raise by the imposition of a water-rate.

ORDER.—Ordered that a copy of this Resolution be forwarded to the Commissioner of Dacca, and to the Public Works Department of this Government, and that it be published in the *Calcutta Gazette*.

By order of the Lieutenant-Governor of Bengal,

H. J. S. COTTON,

Offg. Secretary to the Govt. of Bengal.

Rainfall, Weather, and State and Prospects of the Crops.

Statement showing Rainfall, Weather, and State and Prospects of the Crops in the different districts of Bengal, as reported to Government, during the week ending the 15th March 1890.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.			
<i>Western Districts.</i>			
1	Burdwan March 15, '90 Culina Cutwa	Nil 0.52 0.51	Weather—rather cool, but getting hot during the day. Prospects of crops favourable. Sugarcane is being pressed. Prices of common rice :— Srs. Burdwan 17½ Culina 15 Cutwa 16½ Banigunge 18½ } per rupee.
2	Bankura .. 15, '90	0.60	Weather—seasonable. Rubbi harvest is finished, and sugarcane harvest nearly so. Rainfall of 9th and 10th has greatly facilitated preparation of field for next rice sowing. Common rice 20 seers per rupee at Sudder and 18½ seers at Bishenpore.
3	Birbhum .. 15, '90	0.24	Weather—seasonable. State and prospects of crops good. Outturn of sugarcane 16 annas. Price of rice 16½ to 20 seers per rupee.
4	Midnapur .. 15, '90	0.44	Weather—seasonable. The rain has done good to the few crops on the ground. Prices of common rice :— Srs. Sudder 18 Contai 22 Tamluk 16 Ghatal 18 } per rupee.
5	Hooghly .. 15, '90 Serampore Jehanabad	0.24 0.25 0.50	Weather—seasonable; cloudy and showery. All crops promise well. Prices of common rice :— Srs. Sudder 12½ Serampore 16 Jehanabad 17½ } per rupee.
	Hosurah .. 15, '90 Uluberia	0.22 0.38	Weather—seasonable. State and prospects of crops good.
<i>Central Districts.</i>			
6	24-Pargahs March 15, '90	0.41	Weather—rather warm. Prospects of crops good. Lands being prepared for <i>aus</i> . Price of common rice 14 to 15 seers per rupee.
7	Nudda .. 15, '90 Koochta Mcherpur Choodanga Ranaghat	0.20 ... 0.19 0.22 0.25 0.55	Weather—cloudy with slight rain. Prospects of the crops on the ground are favourable. Harvesting of gram, linseed, and pulses is still going on. Cultivation of land for early rice proceeding.
8	Khoolna .. 15, '90	Nil	Weather—getting warm. Condition of crops on the ground good.
9	Jessore .. 15, '90 Jhenidah Magura Narnil Bongong	0.35 0.20 0.15 0.15 0.30	Weather—getting hot. More rain wanted for cultivation. Harvesting of linseed and peas going on. Average outturn of <i>kalei</i> and mustard 9 and 8 annas respectively. Prices stationary.
10	Moorshedabad .. 15, '90 Jungipore Kandi	0.05 0.19 0.10	Fine weather with passing clouds. Getting hot. Harvesting of <i>rubbi</i> crops proceeds. Lands are being ploughed for <i>dhadoi</i> sowings.
11	Dinagpur .. 15, '90	Nil	Weather—hot with strong west wind. Ploughing going on. Rain wanted. Sugarcane being pressed.
12	Rajshahye .. 15, '90 Nattore	Nil 0.03	Weather—seasonable: growing hot. Rain wanted. The few remaining crops on the ground are being rapidly got in with generally fair outturn.
13	Kangpur .. 15, '90	0.02	Weather—sultry days, but cool nights; cloudy in evenings. Rain much wanted for <i>aus</i> and jute cultivation. Some fears of drought entertained.
14	Hogra .. 15, '90	Nil	Weather—seasonable. Sowing of <i>aus</i> paddy in some low lands has commenced. Standing crops promising. <i>Khesari</i> is being reaped. Sugarcane is being cut. Common rice selling at 18 seers per rupee.
15	Panna .. 15, '90	0.05	Weather—cloudy at times. Outturn of <i>rubbi</i> crops fair. Rain wanted for <i>cheena</i> and <i>kaon</i> crops and for ploughing. Price of rice rising slightly.
16	Darjeeling .. 15, '90	Nil	Weather—fair. Wheat and barley progressing favourably. In Terai lands are being ploughed for jute and <i>dhadoi</i> paddy. Prices of common rice :— Srs. Darjeeling 12 Kurseong 13½ Silliguri 10 } per rupee.
17	Chhipigoree .. 15, '90	Nil	Weather—hot in day, cool at night. Winter crops being reaped, and an average outturn expected. Ploughing of land for cultivation of <i>dhadoi</i> going on. Rain much wanted to enable <i>dhadoi</i> sowings to be made. No change in prices.

No.	District and date of return.	Rainfall at standard station in inches.	Character of the weather and state and prospects of the crops.
BENGAL.—concluded.			
Eastern Districts.			
Dacca Divn.	18 Dacca March 15, '90	0.05	Weather—fine and getting warm. No rain in Naralingganj. Mustard and pulses being gathered. Cultivation going on for early crops. <i>Boro</i> paddy thriving, but rain wanted. Fodder available. No special change in prices of food-grains. Common rice 13 to 15 seers per rupee.
	19 Furraddpur „ 15, '90	0.14	Weather—getting warm. Lands being ploughed for jute and paddy, but rain wanted. Crops on the ground doing fairly well. Price of rice stationary.
	20 Backergunge „ 15, '90	0.47	Weather—cloudy and warm. Prospects of <i>rubbi</i> crops fair. Rice selling at 18½ seers per rupee.
	21 Mymensingh „ 15, '90	0.02	Weather—seasonable, but strong westerly wind blowing for some days during the day time. Prospects of crops good. <i>Boro</i> crop doing well. Coarse rice sells at 18 seers per rupee.
	22 Chittagong „ 15, '90	0.05	Weather—seasonable. Rain is still wanted for winter crops. Common rice selling at 17 seers per rupee.
Chittagong Divn.	23 Noakholly „ 15, '90	Nil	Weather—warm and cloudy. Harvesting of <i>rubbi</i> crops nearly completed. Preparation of land for <i>amr</i> going on. Rain is much wanted.
	24 Tipperah „ 15, '90	0.22	Weather—cloudy and cool with wind. <i>Boro</i> paddy thriving. <i>Amr</i> , jute, and <i>sil</i> being planted. Chillies ripening. Prospects good. More rain wanted for crops.
	25 Chittagong Hill Tracts.	...	Report not received.
BEHAR.			
Patna Divn.	Hill Tipperah	...	Report not received.
	26 Patna „ 15, '90	Nil	Weather—cool at night and hot during the day, with occasional clouds and strong winds. Harvesting of <i>rubbi</i> in full progress. Collection of opium continues. Prospects favourable. Prices of food-grains slightly falling.
	27 Gya „ 15, '90	Nil	Weather—seasonable. <i>Rubbi</i> crops are being cut. Opium is being extracted. Prices of food-grains stationary.
	28 Shahabad „ 15, '90	Nil	Weather—cloudy with high winds. Harvesting of wheat and barley going on with fair outturn. Collection of opium nearly finished with a similar result. Sugarcane being transplanted.
	29 Darbhanga „ 15, '90	Nil	Strong west wind prevailing. Harvesting of <i>rubbi</i> in progress. Outturn of wheat and mustard estimated at 12 annas on an average. Paddy and <i>mung</i> being sown in <i>chur</i> lands. Extraction of opium still going on; prospects remain good. Common rice selling at from 19 to 21 seers per rupee.
	30 Mozufferpur „ 15, '90	Nil	Strong west winds. <i>Rubbi</i> crops are being cut. Indigo sowings completed. Ret sowings were necessary only in a very few cases. Wheat estimated to give from 12 to 16 annas outturn. Collection of opium nearly completed; cloudy and windy weather has not been favourable; outturn will probably be below average.
	31 Saran „ 15, '90	Nil	Weather—warm with west wind. Harvesting of <i>rubbi</i> in full swing; outturn favourable. <i>Rakar</i> is a full crop and is being cut. Collection of opium in progress.
	32 Champaran „ 15, '90	Nil	Weather—warm and clear; west wind prevailing. Harvesting of <i>rubbi</i> and collection of opium progressing. Indigo sowings nearly finished. Mango flowers healthy. Common rice selling at 17 seers per rupee.
Bhagalpur Divn.	33 Monghyr „ 15, '90	Nil	Weather—generally cloudy with strong westerly wind. A few drops of rain fell on the night of the 14th. Harvesting of <i>rubbi</i> crops going on. Prices of food-grains almost stationary.
	34 Bhagalpur „ 15, '90	Nil	Weather—seasonable. <i>Rubbi</i> crops doing well. Barley, wheat, gram, <i>masur</i> , and <i>rakar</i> being gathered. Outturn of linseed some 8 annas.
	35 Purneah „ 15, '90	Nil	Weather—hot westerly winds with cool nights and mornings. <i>Rubbi</i> crops doing well; harvesting commenced. Preparation for <i>bhadoi</i> progressing, and <i>kaori</i> and other millets being sown.
	36 Maidah Shibganje „ 15, '90	0.05 0.09	Weather—warm and cloudy. High west wind prevails. Slight rain on three days of the week. Harvesting of <i>rubbi</i> crops begun. <i>Boro</i> transplantation nearly over. Rain has done some injury to mango blossoms. Price of common rice stationary.
	37 Santhal Pergba. „ 15, '90	0.15 0.05 0.40 0.29	Weather—occasionally cloudy. Getting hot. Harvesting of <i>rubbi</i> nearly over. Little or no crops now on the ground. Sugarcane doing well. Outturn of <i>rubbi</i> about 10 or 12 annas.

No.	District and date of return.	Rainfall at Sudder Station in inches.	Character of the weather and state and prospects of the crops.
ORISSA.			
ORISSA DIV.	18 Cuttack March 15, '90	0.82	Weather—seasonable. Tobacco is being reaped. <i>Datura</i> rice doing well. General prospects continue good.
	20 Pooner Khoorda „ 14, '90	0.15 0.55	Weather—cloudy with high wind. Lands are being ploughed for the ensuing <i>sarad</i> crop. <i>Mung</i> is in pod. <i>Datura</i> crop is in ear. The rainfall during the week has done good to mango and <i>mung</i> crops.
	40 Balasore „ 15, '90	2.54	Weather—seasonable. The recent rain has been most favourable for tillage and pasture.
CHOTA NAAGPORE			
South-West Frontier Agency.			
CHOTA NAAGPORE DIV.	41 Masaribagh March 15, '90	0.36	Weather—seasonable, becoming warm. Sugarcane is being transplanted. Poppy yielding well. Mango and <i>mohua</i> promising.
	42 Lohardugga „ 15, '90	0.50	Weather—cloudy. Reaping of <i>rabbi</i> crops almost completed in the head-quarters subdivision. Rain and cloud have done some damage to standing <i>rabbi</i> crops and also to mungo and <i>mohua</i> in the Palamow subdivision. Estimated damage is four annas.
	Palamow (up to 10th) „	0.96	
	43 Singhbhum „ 15, '90	0.84	Weather—warm. Prospects of crops good. <i>Mohua</i> and mungo somewhat damaged by rain, and 8 to 12 annas crop expected.
	44 Manbhum „ 15, '90	0.39	Weather—warmer; a little cloudy. Wheat, barley, and gram ripening. Average outturn 10 annas. Rice is selling at 20 to 23 seers per rupee.
	Gerindpore „	0.83	

Published for general information.

CALCUTTA; REVENUE DEPT.,
The 18th March, 1890.P. NOLAN,
Secy. to the Govt. of Bengal.

The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the 1st of January to the 31st of December 1889.

IMPORTS INTO CALCUTTA.

Whence imported.	FOOD-GRAINS.							FIBROUS PRODUCTS.		OLEAGINOUS.		Tea, Indian.	Cotton, raw.	Milk, raw.	SUGAR.		Tobacco, manufactured.
	RICE AND PADDY.			Wheat.	Gram and pulses.	Other food-grains.	Total.	Jute, raw.	Gunny bags, &c.	Linseed.	Mustard seed.				Refined.	Unrefined.	
	Rice.	Paddy.	Total (in mds).														
Report.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Burdwan	1,30,881	8,197	1,39,078	688	2,568	.....	1,38,914	284	18,885	637	1,801	808	6	185	.....	885	400
Barrackpore	3,19,661	885	3,19,771	311	.....	.....	3,19,882	.....	7,395	.....	900	.....	.....	215	.....	.....	.....
Medinipur	3,01,556	4,904	3,06,460	.....	.....	.....	3,04,101	4,904	1,000	667	749	.....	60	83	.....	780	1,100
H. coaly	98,189	8,744	1,06,933	1,443	1,023	886	1,04,801	92,671	182,240	1,681	1,915	.....	.....	16	.....	2,924	2,700
24 Pargunnas	3,25,353	18,392	3,43,745	.....	978	.....	3,39,612	1,44,513	377,923	8	.....	3,048	.....	4,700	.....	22,015	1,600
Medinipur	8,392	18	8,410	12,215	68,000	1,481	78,835	68,174	3,500	12,583	4,289	.....	118	.....	848	.....	.....
Khulna	4,352	9,000	13,352	1,077	.....	.....	13,977	16,731	105	.....	.....	.....	.....	4,000	.....	.....	.....
Jessore	4,744	6,625	11,369	1,602	.....	.....	10,187	9,590	149	338	432	.....	30	20	10,165	1,507	.....
Meershedabad	2,104	.....	2,104	4,812	4,940	273	88,141	7,051	1,380	.....	.....	.....	1	285	.....	.....	.....
Dumraon	887	.....	887	.....	.....	.....	88	20,990	205,790	.....	228	.....	.....	.....	.....	.....	.....
Kaishabe	361	.....	361	1,046	1,785	.....	3,794	61,495	325	70	.....	.....	.....	195	.....	.....	.....
Kanpur	32	.....	32	.....	.....	.....	32	2,88,158	87,036	.....	4,292	.....	.....	.....	.....	5,880	.....
Rajshahi	5,629	.....	5,629	.....	.....	.....	5,629	12,865	.....	.....	.....	.....	1	.....	.....	.....	.....
Darjeeling	100	.....	100	101	965	.....	1,076	4,63,279	518,455	106	9,380	.....	.....	.....	.....	110	.....
Calcutta	775	.....	775	.....	.....	.....	1,805	1,11,965	3,7,225	.....	1,102	18,410	.....	.....	.....	.....	.....
Barisal	5,850	300	6,150	1,024	.....	.....	10,229	3,21,394	700	173	2,616	24,272	1,682	.....	.....	687	.....
Chittagong	1,57,944	69	1,58,013	4,192	.....	.....	1,58,325	3,65,991	340	601	1,980	347	144	5	.....	1,400	.....
Myittha	77	.....	77	81	.....	.....	158	3,725	.....	.....	2,269	.....	.....	.....	.....	.....	.....
Chittagong	3,390	.....	3,390	.....	.....	.....	3,390	7,100	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chittagong	3,390	.....	3,390	.....	.....	.....	3,390	7,100	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chittagong	15,593	400	16,033	.....	.....	.....	15,833	1,173	.....	.....	.....	.....	2,970	.....	.....	.....	.....
Total of Bengal	14,06,657	52,715	14,41,654	25,824	74,609	2,330	16,62,480	24,87,009	1,914,582	18,687	32,251	40,200	8,771	884	4,245	65,933	27,700
BEHAR.																	
Patna	2,483	.....	2,483	3,654	62,772	3,949	72,242	.....	1,610	38,728	11,040	1	80	7	.....	9,048	510
Gaya	86	.....	86	2,747	1,094	.....	4,497	34	.....	4,065	2,952	.....	.....	24	.....	23,464	10
Shahabad	.....	.....	.....	4,256	19,063	32	23,381	.....	105	9,886	1,664	.....	.....	.....	.....	18,035	.....
Muzaffarpore	.....	.....	.....	.....	.....	3,080	3,080	.....	35	750	1,664	.....	.....	.....	.....	6	.....
Barrackpore	6,030	582	6,612	509	1,550	712	8,583	.....	.....	87,318	25,084	.....	1	.....	.....	.....	.....
Dumraon	.....	.....	.....	76	.....	.....	76	.....	210	11,808	800	.....	.....	.....	.....	811	.....
Champan	496	.....	496	.....	857	.....	1,353	.....	.....	6,548	4,735	.....	.....	.....	.....	.....	.....
Champan	7,447	.....	7,447	11,800	29,016	.....	5,800	14	3,685	1,891	4,735	.....	.....	.....	.....	52	.....
Champan	15,904	.....	15,904	22,225	7,496	7,078	35,774	70	2,366	29,747	.....	.....	.....	.....	.....	.....	.....
Champan	428	.....	428	2,380	1,245	.....	4,003	58,784	1,070	1,070	13,165	244	.....	.....	.....	.....	.....
Champan	.....	.....	.....	4,884	87	815	5,084	14,240	1,000	1,000	.....	.....	.....	.....	.....	.....	.....
Champan	14,916	.....	14,916	24,804	3,361	2,038	47,915	9,130	1,050	3,761	4,382	.....	.....	25	.....	.....	.....
Total of Behar	50,170	585	50,755	79,764	129,743	10,210	2,78,350	77,214	7,105	1,19,885	1,03,498	235	87	30	.....	63,004	1,600
ORISSA.																	
Cuttack	545	.....	545	.....	.....	.....	545	1,231	.....	1,231	.....	.....	.....	.....	.....	.....	.....
Balasore	67,148	4,649	71,797	165	.....	.....	71,126	24,797	600	1,275	918	.....	.....	.....	.....	.....	.....
Total of Orissa	67,693	4,649	72,342	165	.....	.....	71,671	26,028	600	1,275	918	.....	.....	.....	.....	.....	.....
CHOTA NAGPORE.																	
Hazratnagar	4,221	.....	4,221	.....	1,100	.....	1,100	1,284	.....	1,717	597	.....	.....	.....	.....	.....	.....
Manbhum	.....	.....	.....	.....	25	.....	4,221	429	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total of Chota Nagpore	4,221	.....	4,221	.....	1,100	25	5,440	1,713	.....	1,717	597	.....	.....	.....	.....	.....	.....
Grand Total of supplies from the Provinces under the Lieutenant-Governor of Bengal.	15,20,771	57,949	15,78,720	1,08,102	2,05,049	21,577	18,07,380	34,00,249	1,924,686	1,80,587	1,38,364	41,067	8,798	953	4,246	1,02,531	28,810
OTHER PROVINCES.																	
Assam	10	.....	10	.....	.....	.....	10	33,708	.....	22,281	1,10,478	306	550	.....	.....	.....	.....
North-Western Provinces and Oudh	10	.....	10	71,904	66,159	8,083	1,46,096	.....	870	44,043	10,431	535	34,004	.....	.....	1,583	.....
Punjab	9	.....	9	64,895	10,129	5,749	80,773	.....	.....	.....	610	4,679	.....	19	.....	.....	.....
Central Provinces and Berar	.....	.....	.....	7,201	1,554	.....	9,115	.....	.....	104	.....	.....	.....	.....	.....	.....	.....
Madras	.....	.....	.....	.....	.....	.....	.....	7,400	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bombay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other places	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Total of Imports in Dec. 1899	15,30,537	57,849	15,88,386	2,26,552	2,52,778	35,600	21,21,711	35,14,506	1,932,970	1,84,636	1,77,007	1,58,644	1,86,485	1,500	9,541	1,04,210	29,125
in Dec. 1898	11,58,474	1,61,634	12,19,630	1,85,729	1,99,054	19,276	15,82,273	21,11,235	2,418,287	4,81,694	81,891	1,28,368	1,55,900	2,194	33,783	91,731	10,152

* One mound of paddy is equivalent to 26 sacks of rice.

† Exclusive of bags obtained by local manufacture.

The Sea-borne Trade of Calcutta in these Staples during the month of December, 1889, was as follows:—

[illegible]

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of December, 1889.

IMPORTS INTO CALCUTTA.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		TOBACCO.	
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard seed.				Refined.	Unrefined.	Manufactured.	Manufactured.
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
By country boats ...	8,47,346	28,255	81,456	57,578	8,466	9,01,014	839,930	18,080	41,041	...	6,754	107	1,844	32,067	13,676	1,613
By river steamers ...	80,525	449	...	1,772	...	2,07,601	...	1,761	17,014	1,14,054	182	4	...	101	101	...
By rail { East Indian Railway ...	3,16,780	11,800	1,94,079	2,05,184	20,930	33,400	38,290	1,58,758	1,01,241	2,413	1,80,276	606	88	66,341	910	448
By rail { Eastern Bengal State Railway ...	18,976	51	1,037	22,477	2	11,43,493	1,311,640	4,090	16,776	39,900	1,047	750	...	2,749	9,400	...
By road ...	41,590	2,374	...	394	...	1,01,188	34,500	...	...	...	160	...	2,407	14,429	4,815	807
By sea ...	82,920	4,650	...	5,071	...	21,744	8,500	1,377	475	1,446	10,431	9	2,399	...	387	614
Grand Total of Imports in December, 1889 ...	15,39,927	57,849	2,26,552	2,91,776	35,400	25,14,568	1,932,870	1,44,336	1,77,097	1,58,954	1,58,625	1,530	9,541	1,04,216	29,183	2,603
Grand Total of Imports in December, 1889 ...	11,84,474	1,01,034	1,43,729	1,90,030	19,276	21,11,295	2,413,287	4,81,694	83,901	1,28,389	1,54,890	2,191	33,783	91,741	16,124	29,444

The following Statement shows the Values, Quantities, and Numbers of the Principal Staples of Traffic exported Inland from Calcutta during the month of December, 1889.

EXPORTS FROM CALCUTTA.

Whether exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.	Whether exported.	Cotton piece-goods.		Cotton twist.		Salt.	Gunny-bags.																				
	European.	Indian.	European.	Indian.				European.	Indian.	European.	Indian.																						
	Rs.	Rs.	Mds.	Mds.	Mds.	No.		Rs.	Rs.	Mds.	Mds.	Mds.	No.																				
BENGAL.																																	
Bahawan	2,45,907	2,310	459	1,544	25,007	61,920	CHOTA NAAGPORE.																										
Barrabhoon	1,78,227		54		10,463	177,562	Hazaribagh	40,623	3,030	1	79	6,315	8,445																				
Bansberia	2,47,927		8,507		21,005	26,990	Manbhum	86,625		26	1,614	5,713	2,320																				
Basirhat	88,172	1,000	554	120	2,681	25,611	Total of Chota Nagpore							1,32,078	3,630	27	1,093	12,028	3,865														
Chakraborty	1,05,175	1,280	291		10,500	17,492	Grand total of supplies into the Provinces under the Lieutenant-Governor of Bengal							79,74,294	37,455	12,180	16,317	6,29,656	14,79,440														
Chakraborty	5,1,592		2,018		29,379	78,411	OTHER PROVINCES.																										
Chakraborty	75,416		73		3,811	605	Assam	4,78,537		819	609	21,904	2,400																				
Chakraborty	1,70,141		479		24,851	1,065	North-Western Provinces and Oudh	27,52,783	14,180	2,903	666	24,325	387,273																				
Chakraborty	66,339		20	36	6,450	16,143	Punjab	5,09,040	3,089	634	12		409,245																				
Chakraborty	1,49,402		119		9,738	18,200	Central Provinces	37,044		262	7		209,935																				
Chakraborty	1,32,828		17		12,173	29,480	Rajputana and Central India	27,906	110	200			970																				
Chakraborty	4,00,980		248		15,318	7,310	Bihar						40,713																				
Chakraborty	1,72,063				8,384	71,575	Nepal		110				210																				
Chakraborty	1,44,212		279	6	24,510	1,030	Nizam's Territory	315																									
Chakraborty	2,21,507		196		4,091		Bombay	1,107	600	17			1,729,300																				
Chakraborty	1,29,807		172		8,610	305	Madras	22,000		385	820		966,825																				
Chakraborty	50,82,823	530	1,300	74	31,978	6,935	British India	1,000					76,000																				
Chakraborty	2,17,006		362		44,704	382	Burmah	2,45,049	300		2,402	3	1,647,303																				
Chakraborty	2,48,030		617		22,700	1,810	Sindh						43,750																				
Chakraborty	1,98,673		17	5	43,638	245	Other places	6,535	3,994	19	11,499		7,831,300																				
Chakraborty					150		Grand Total of Exports in Dec. 1889							1,30,51,005	59,095	18,007	31,924	6,78,120	14,745,048														
Chakraborty	60,150		95		625	133,050	Exports in Dec. 1889							1,29,41,043	6,776	26,012	12,877	6,62,404	16,458,817														
Chakraborty	540				8,900		The Sea-borne Trade of Calcutta in these Staples during the month of December, 1889 was as follows:-																										
Total Bengal														48,58,006	9,076	11,087	2,026	3,90,148	711,500	IMPORTED INTO CALCUTTA-							Rs.*	Rs.	Mds.	Mds.	Mds.	No.	
BEHAR.																				From Foreign Ports—													
Patna	1,40,790				250	870	25,187	137,563	United Kingdom	70,89,124		8,917		5,58,000																			
Gya	1,47,110	7,020	80	1,041	10,095	24,985			Other Foreign ports	1,32,693		450		1,84,108																			
Katihar	5,20,822		67	827	15,035	46,410			Total of Foreign Trade	72,21,817		9,367		7,42,108																			
Manbhum	1,24,180		48	9,024	2,483				From Indian Ports—																								
Manbhum	2,81,630		8	605	23,700	49,835			Bombay	1,76,224			10,785		7,400																		
Manbhum	2,88,508		1	75	17,447	12,072			Madras	20,886			29																				
Manbhum	3,74,004		27	11	13,822	19,882			Other ports in Madras	703			403																				
Manbhum	1,78,047	580	15	391	10,608	28,453			Burmah	11,145	940				500																		
Manbhum	3,78,000	7,590	79	372	23,355	108,380			Other Indian ports	11,300					630																		
Manbhum	1,04,178		142	437	18,392	24,563			Sindh	833																							
Manbhum			30		11,036	4,450			Total of Interprovincial Trade	1,32,225	940		11,190		3,500																		
Manbhum	2,60,737	8,000	289	982	17,367	60,618			Grand Total of Imports in Dec. 1889	74,54,041	940	9,367	11,190	7,41,108	3,500																		
Total of Behar														29,13,240	24,750	828	5,340	2,01,350	545,403	ports in Dec. 1889							11,022,975	61,791	18,343	14,650	7,76,791	32,000	
ORISSA.																																	
Cuttack	14,500				1,368	4,583	44,250																										
Bilaspore	85,804		76	5,390	12,760	175,190																											
Total of Orissa														1,03,306		154	7,048	17,340	217,430														

* As per tariff declaration value.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of December, 1889.

SPECIFICATION OF ROUTES.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Gunny-bags.
	European.	Indian.	European.	Indian.		
	Rs.	Rs.	Mds.	Mds.	Mds.	No.
By country boats ...	1,94,450	4,930	3,143	...	2,75,110	131,097
By river steamers ...	8,70,000	530	...	784	36,708	34,243
By rail { East Indian Railway ...	86,20,130	48,840	6,607	9,810	2,61,140	4,704,040
By rail { Eastern Bengal State Railway ...	85,10,738	...	6,305	...	82,450	173,772
By road ...	1,04,032	1,285	572	...	4,028	6,045
By sea ...	6,02,524	4,004	1,136	...	15,692	12,598,075
Grand Total of Exports in December, 1889 ...	1,20,44,100	50,000	18,007	32,924	8,70,120	14,705,045
Exports in Dec. 1889 ...	1,29,41,043	67,791	34,012	17,487	8,62,404	16,458,817

Meteorological Report of the Province of Bengal

METEOROLOGICAL DIVISIONS.			STATION OBSERVATIONS.														
			AIR PRESSURE.			WIND.		TEMPERATURE.									
			Mean barometric height, 8 A.M.	Mean reduced to sea-level.	Variation from mean.	Prevailing direction.	Mean wind velocity.	Highest during week.	Date.	Lowest during week.	Date.	Mean maximum temperature.	Mean minimum temperature.	Mean daily temperature.	Variation from normal mean of week.	Mean, 8 A.M. temperature.	
OPERA.	Poorbe	Poorbe (Gopalpore False Point)	29.879	29.891	-.012	SW	257	87.2	13, 14 Mar.	72.0	13th Mar.	80.2	75.0	77.6	-.1	78.0	
			29.874	29.886	-.012	SW	274	88.1	14th ..	70.1	14th ..	80.0	75.0	77.5	-.1	78.0	
			29.871	29.883	-.012	SW	274	86.9	14th ..	70.1	14th ..	80.0	75.0	77.5	-.1	78.0	
SOUTH-WEST BENGAL.	Cuttack	Cuttack	29.851	29.864	-.013	Calm	72.0	94.4	9th ..	69.8	8th ..	83.5	71.7	77.6	-.1	77.4	
	Malasore	Malasore	29.829	29.800	-.029	South-westerly	141.1	91.4	12th ..	61.5	14th ..	84.0	67.8	75.9	-.1	73.9	
	South-West Midnapore	Sankar Island	29.864	29.891	-.027	South-westerly	330	86.2	13th ..	70.0	10th ..	83.2	73.9	78.6	-.1	78.3	
SOUTH-WEST BENGAL.	Midnapore	Midnapore	29.745	29.810	-.065	S	292.2	94.3	9th & 12th Mar.	66.2	8th, 10th Mar.	91.4	68.5	80.0	-.0	72.6	
	24-Pergunnahs	Calcutta	29.876	29.892	-.016	Westerly	103.0	88.5	9th & 12th Mar.	63.3	8th ..	89.8	67.4	77.0	-.1	72.0	
	Howrah Hooghly	Calcutta	29.877	29.893	-.016	Variable	61.0	94.1	9th ..	61.4	8th ..	89.7	67.2	78.4	-.1	71.9	
SOUTH-WEST BENGAL.	Burdwan	Burdwan	29.837	29.858	-.021	W	68.9	91.8	13th ..	63.7	8th ..	88.4	66.3	77.3	-.1	70.0	
	Bankura	Bankura	29.843	29.858	-.015	Westerly	63.7	92.6	9th, 14th Mar.	60.9	11th ..	88.5	65.7	77.3	-.1	69.8	
	Barhampur West Burdwan	Barhampur	29.865	29.876	-.011	W	114.6	92.3	14th ..	60.7	8th ..	88.5	65.0	76.3	-.1	69.9	
SOUTH-WEST BENGAL.	Noorhaddad	Krishnagar	29.836	29.864	-.028	WSW	119.3	92.3	14th ..	60.9	6th ..	85.5	64.2	75.3	-.1	70.4	
	Nuddea	Jessore	29.854	29.883	-.029	SW	58.0	91.3	13th, 14th Mar.	62.6	8th, 10th Mar.	82.7	67.6	77.6	-.1	71.8	
	Jessore Khosla	Jessore	29.817	29.860	-.043	Variable	65.7	88.6	8th ..	63.6	8th ..	87.2	67.5	77.5	-.1	70.1	
SOUTH-WEST BENGAL.	Chittagong	Chittagong	29.817	29.860	-.043	Variable	65.7	88.6	8th ..	63.6	8th ..	87.2	67.5	77.5	-.1	70.1	
	Chittagong Hill Tracts	Dumagiri	29.883	29.896	-.013	SW	101.6	87.8	9th, 13th Mar.	59.6	10th ..	85.9	68.9	77.4	-.1	74.6	
	Backersunge	Harrisal	29.872	29.876	-.004	NW	166.3	87.3	12th ..	60.9	8th ..	83.2	67.8	75.5	-.1	70.3	
SOUTH-WEST BENGAL.	Noakholly	Noakholly	29.853	29.874	-.021	SW	102.1	86.0	13th ..	61.0	10th ..	83.9	66.4	75.1	-.1	71.3	
	Furriedpore	Furriedpore	29.856	29.879	-.023	SSW	119.6	91.1	12th ..	60.8	10th ..	87.5	65.9	76.7	-.1	71.0	
	Dacca	Dacca	29.856	29.879	-.023	SSW	119.6	91.1	12th ..	60.8	10th ..	87.5	65.9	76.7	-.1	71.0	
SOUTH-WEST BENGAL.	Comillah	Comillah	29.856	29.879	-.023	South-westerly	86.2	88.4	12th ..	63.9	8th ..	84.8	66.3	75.6	-.1	70.1	
	Mymensingh	Mymensingh	29.815	29.875	-.060	South-westerly	82.9	90.9	14th ..	67.0	8th ..	85.9	61.9	73.9	-.1	68.0	
	Bogra	Bogra	29.781	29.860	-.079	SW	123.0	93.8	13th ..	60.0	10th ..	83.9	63.0	76.5	-.1	70.0	
SOUTH-WEST BENGAL.	Pabna	Serejunge	29.814	29.861	-.047	SW	81.7	92.0	13th & 14th	61.6	8th ..	85.1	62.3	73.5	-.1	70.7	
	Rajshahye	Rampore Head	29.815	29.855	-.040	SW	107.8	91.8	13th ..	60.8	10th ..	82.8	65.9	76.7	-.1	69.7	
	Malda	Malda	29.774	29.857	-.083	SW	77.2	94.0	13th ..	67.5	8th ..	83.0	60.6	74.0	-.1	73.1	
SOUTH-WEST BENGAL.	Dinapore	Dinapore	29.723	29.846	-.123	SW	126.0	92.0	13th ..	65.2	10th ..	85.9	60.0	73.0	0	69.0	
	Rangpore	Rangpore	29.729	29.857	-.128	W	118.7	90.8	13th ..	64.0	10th ..	86.6	65.4	75.5	-.1	69.1	
	Julpigoree	Julpigoree	29.653	29.835	-.182	Northerly	132.6	95.2	14th ..	60.4	10th ..	86.1	62.4	69.3	-.1	69.0	
SOUTH-WEST BENGAL.	Cooch Behar	Julpigoree	29.653	29.835	-.182	Northerly	132.6	95.2	14th ..	60.4	10th ..	86.1	62.4	69.3	-.1	69.0	
	Darjeeling Hill Tracts	Darjeeling	29.882	29.882	0.000	WSW	213.4	60.0	14th ..	58.2	10th ..	54.8	38.5	46.7	-.1	47.1	
	Purneah	Purneah	29.709	29.766	-.057	South-westerly	184.7	60.7	13th ..	63.0	8th, 10th Mar.	80.1	67.4	71.7	-.1	68.3	
SOUTH-WEST BENGAL.	North Bhagulpore	Purneah	29.709	29.766	-.057	South-westerly	184.7	60.7	13th ..	63.0	8th, 10th Mar.	80.1	67.4	71.7	-.1	68.3	
	Moanpore	Moanpore	29.870	29.843	-.027	WSW	164.4	89.4	13th Mar.	?	?	80.0	?	?	?	67.5	
	Burbbhanga	Burbbhanga	29.867	29.846	-.021	WSW	283.6	89.3	13th ..	60.9	8th ..	85.5	64.0	69.9	-.1	62.5	
SOUTH-WEST BENGAL.	Obanpore	Obanpore	29.651	29.851	-.200	WNW	179.7	91.3	13th ..	60.9	10th ..	87.1	61.0	74.4	0	70.9	
	Chupra	Chupra	29.624	29.801	-.177	S. wly.	164.4	91.1	13th ..	61.0	14th ..	86.6	63.2	76.0	-.1	70.9	
	Shahabad	Burra	29.651	29.801	-.150	W	161.9	91.4	13th ..	60.2	10th ..	86.1	61.3	74.7	-.1	69.0	
SOUTH-WEST BENGAL.		Arrah	29.609	29.876	-.267	SW	189.8	91.5	13th ..	60.0	10th ..	87.6	62.7	75.3	-.1	72.1	
	Gya	Gya	29.603	29.840	-.237	South-westerly	90.8	92.6	13th ..	60.1	10th ..	87.1	64.1	75.6	-.1	69.9	
	Patna	Patna	29.673	29.864	-.191	South-westerly	100.6	91.9	13th ..	60.3	10th ..	87.5	63.3	76.5	-.1	71.3	
SOUTH-WEST BENGAL.	South Midnapore	Bhagulpore	29.673	29.861	-.188	Calm & S. wly.	90.9	93.2	13th ..	67.0	10th ..	86.5	63.9	76.2	-.1	71.5	
	South Midnapore	Boomha	29.580	29.873	-.293	Westerly	92.5	93.1	13th ..	60.5	8th ..	86.6	63.4	76.1	-.1	71.3	
	Hazaribagh	Hazaribagh	27.652	29.800	-.148	Westerly	174.8	86.2	13th ..	60.3	10th ..	81.8	61.5	71.6	-.1	69.4	
SOUTH-WEST BENGAL.	Leharunga	Manchee	27.733	29.807	-.074	Variable	89.6	88.5	14th ..	67.4	10th ..	80.9	60.3	70.3	-.1	68.9	
	Binahom	Chyabasa	29.109	29.100	-.009	WSW	40.0	88.6	13th ..	64.7	11th ..	60.7	60.1	77.9	-.1	70.9	

* Means of five days. † Means of six days.
 Explanation.—Summary.—The normal means of air pressure and temperature are the arithmetical average or means of the readings during the same period for the last five or six years. The humidity of the atmosphere is expressed as percentage, saturated air being presumed by 100. A clear sky is denoted by 0 and an overcast sky by 10. The number of rainy days is the number of days on which the rainfall is at least one hundredth of an inch. The rainfall is the sum of the readings of the rain-gauge in that district determined from the returns sent in by the subdivisions for the period in question during the past season. The district reading is the sum of the readings divided by the number of stations. A rainy day is one on which at least hundredth of an inch fell.

for the week ending Friday, the 14th of March 1890.

DISTRICT OBSERVATIONS.															Representative station.	District.	METEOROLOGICAL DIVISION.
No.	Average humidity at 5 A.M.	Average cloud amount at 5 A.M. for week.	Rainfall of week at observing station.	OF WEEK.		RAINFALL.						Average number of rainy days.	Normal number of rainy days.				
				Mean for district.	Normal mean.	Since 1st of month.			Since 15th May 1889.								
						Mean for district.	Normal mean.	Variation.	Mean for district.	Normal mean.	Variation.						
79	83	5.4	0.15	0.18	0.25	0.25	+0.30	57.17	53.35	+3.82	2.9	0.6	Poorce	Poorce	Orissa.		
80	79	3.6	0.03										Gopalpore				
81	79	7.9	0.27										Paise Point				
82	79	3.7	0.97	0.75	0.34	0.75	0.35	+0.40	57.17	53.35	+3.82	2.9	0.6	Cuttack	Cuttack		
83	84	1.0	2.68	1.46	0.25	1.53	0.45	+1.08	51.00	54.83	-3.83	2.8	0.8	Balasore	Balasore		
84	83	5.0	0.78	1.27	0.19	1.37	0.52	+0.75	50.91	54.27	-4.36	2.7	0.5	Saugor Island	South-West Midnapore		
85	71	2.9	0.30	0.80	0.33	0.85	0.63	+0.68	47.77	52.20	-4.43	2.0	0.6	Midnapore	South 24-Pargunnahs		
86	85	0.1	0.29	0.32	0.24	0.34	0.68	-0.14	54.04	52.80	+1.24	2.0	0.6	Calcutta	24-Pargunnahs		
87	80	5.1	0.37	0.47	0.25	0.47	0.54	-0.17	44.35	48.55	-4.20	1.7	0.6	Burdwan	Howrah		
88	75	4.6	0.88	0.74	0.25	0.39	0.61	+0.26	54.53	53.33	+1.20	1.8	0.5	Bankura	Hooghly		
89	71	4.3	0.08	0.33	0.21	0.23	0.35	+0.17	52.95	52.95	+0.00	1.3	0.5	Raneegunge	Nearbhoom		
90	75	3.6	0.05	0.06	0.34	0.18	0.46	-0.22	51.35	51.74	-0.39	0.8	0.5	Barhampore	West Burdwan		
91	73	5.4	0.20	0.20	0.34	0.27	0.73	-0.36	51.95	50.91	+1.07	1.4	0.6	Krishnagar	Moorshedabad		
92	85	0.0	0.35	0.14	0.35	0.19	0.35	-0.06	54.95	55.19	-0.24	1.0	0.7	Jessore	Nudda		
93	85	4.0	0.07	0.33	0.08	0.33	0.35	-0.47	100.73	115.35	-14.62	1.0	0.3	Chittagong	Jessore		
94	84	0.4	Nil	0.15	0.17	0.16	0.85	-0.70	78.57	78.92	-0.35	0.8	0.4	Demagiri	Khoulina		
95	81	0.3	drops	Nil	0.40	0.15	1.67	-1.52	91.04	100.23	-9.19	0.0	0.4	Barisal	Chittagong Hill Tracts		
96	81	6.8	0.14	0.12	0.25	0.13	1.22	-1.10	61.34	59.14	+2.20	0.7	0.7	Noakhali	Backergunge		
97	80	7.6	0.06	0.30	0.09	0.32	1.19	-0.87	76.51	61.90	+14.61	1.3	0.8	Farrodpore	Noakhali		
98	87	6.1	0.21	0.28	0.75	0.69	1.44	-0.75	57.11	71.77	-14.66	1.3	0.8	Dacca	Farrodpore		
99	83	5.1	0.05	Nil	0.35	0.02	0.85	-0.83	55.00	59.06	+19.72	0.0	0.7	Comillah	Dacca		
100	83	2.9	drops	0.01	0.07	0.05	0.35	-0.30	55.62	53.27	+2.35	0.8	0.4	Mymensingh	Tipperah		
101	74	3.6	Nil	0.01	0.40	0.17	0.73	-0.56	55.54	55.13	+0.41	0.5	0.6	Barisal	Bogra		
102	86	1.0	0.04	0.01	0.13	0.04	0.41	-0.38	54.30	53.00	+1.30	0.8	0.6	Barisal	Barisal		
103	87	2.1	0.05	0.03	0.14	0.11	0.30	-0.09	59.90	55.01	+4.89	1.0	0.3	Maldah	Barisal		
104	88	3.4	Nil	0.01	0.09	0.03	0.23	-0.19	57.02	53.10	+3.92	0.3	0.3	Dinapore	Maldah		
105	87	0.5	Nil	Nil	0.27	Nil	0.31	-0.31	55.57	74.77	+19.20	0.0	0.6	Rangpore	Dinapore		
106	85	1.0	Nil	Nil	0.33	Nil	0.05	-0.05	117.75	112.10	+5.65	0.0	0.6	Jalpigoree	Rangpore		
107	86	3.0	Nil	Nil	0.55	Nil	0.07	-0.07	133.45	122.71	+10.74	0.0	0.8	Darjeeling	Jalpigoree		
108	84	2.3	Nil	Nil	0.12	0.05	0.34	-0.19	75.05	59.62	+15.43	0.0	0.4	Purneah	Cooch Behar		
109	82	7.4	Nil	Nil	0.07	0.07	0.35	-0.21	45.92	44.21	+1.71	0.0	0.3	Mosufferpore	Darjeeling Hill Tracts		
110	85	4.3	Nil	Nil	0.14	0.05	0.23	-0.17	62.17	43.33	+18.84	0.0	0.4	Durbhunga	Purneah		
111	75	1.0	drops	Nil	0.03	0.12	0.12	+0.05	40.30	43.55	-3.25	0.0	0.3	Obupra	North Bhagulpore		
112	87	5.8	0.02	Nil	0.13	0.25	0.31	+0.07	40.47	40.70	-0.23	0.0	0.3	Dahree	Obupra		
113	83	5.4	drops	Nil	0.13	0.25	0.31	+0.07	40.47	40.70	-0.23	0.0	0.3	Buxer	Shahabad		
114	86	4.4	0.05	0.01	0.10	0.10	0.31	-0.03	37.37	41.25	-3.88	0.5	0.3	Gya	Buxer		
115	86	5.0	Nil	Nil	0.07	0.11	0.16	-0.05	43.61	41.39	+2.22	0.0	0.3	Bankipore	Gya		
116	83	3.4	Nil	Nil	0.06	0.06	0.17	-0.11	43.55	43.55	-0.00	0.0	0.3	Bhagulpore	Bankipore		
117	80	2.0	0.15	0.15	0.15	0.43	0.32	+0.10	54.57	51.68	+2.89	1.3	0.4	Doomka	South Bhagulpore		
118	86	0.1	0.41	0.27	0.43	0.61	0.63	+0.08	43.64	51.68	-8.04	1.6	0.5	Hasaribagh	Mon-hyr		
119	87	5.3	0.00	0.30	0.32	1.35	0.49	+1.03	45.79	50.14	-4.35	1.7	0.5	Ranchi	Hasaribagh		
120	75	6.1	0.97	0.8	0.40	0.86	0.67	+0.27	49.70	45.00	+4.70	2.0	0.6	Chyabasse	Loharlugga		

ten years. The variations are negative when the mean for the week is less than the corresponding normal mean, and positive when greater. The means of the district are the numerical average of the rainfall returns received in the district, i.e., from total rainfall at the stations.

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of March 1890.

[illegible]

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of March 1890—contd.

Meteorological Division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 15th May 1890.	Average rainfall from 15th May to date.
			Saturday, 8th March.	Sunday, 9th March.	Monday, 10th March.	Tuesday, 11th March.	Wednesday, 12th March.	Thursday, 13th March.	Friday, 14th March.	Number of rainy days.	of Rainfall week.				
EAST BENGAL— —contd.	Nookhally	Gourmaddi	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	61.31	?	
		Banphal	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	85.12	?	
		Nookhally	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1.22	102.58	110.23	
		Penny	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.29	79.45	100.75	
	Farraedpore	Barishpore	Nil	Nil	Nil	Nil	0.02	Nil	Nil	Nil	Nil	0.02	?	81.34	?
		Kamganj	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	85.75	?
		Nadaripore	Nil	0.25	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1.41	62.94	87.94
		Furraedpore	Nil	0.10	Nil	Nil	Nil	Nil	Nil	1	0.10	0.10	1.03	64.15	88.10
	Dacca	Munshihunge	Nil	Nil	0.75	0.12	Nil	0.08	Nil	3	0.95	0.95	1.38	79.44	72.28
		Dacca	Nil	Nil	0.05	Nil	Nil	Nil	Nil	1	0.05	0.05	0.06	70.59	60.40
		Narainkunge	Nil	Nil	0.00	Nil	Nil	Nil	Nil	1	0.00	0.00	1.31	81.23	82.25
		Manikchunge	Nil	Nil	0.08	Nil	Nil	Nil	Nil	1	0.08	0.21	0.56	69.98	81.71
	Hill Tipperah	Joydebore	Nil	Nil	0.06	Nil	Nil	Nil	Nil	1	0.06	0.21	?	85.75	?
		Agartola	Nil	0.20	Nil	Nil	Nil	Nil	Nil	1	0.20	0.51	1.54	64.80	64.16
		Comilla	Nil	0.02	Nil	0.20	Nil	Nil	Nil	2	0.22	0.12	1.4	63.19	78.43
		Chandpore	Nil	Nil	0.55	0.55	Nil	Nil	Nil	2	1.10	0.88	0.77	67.07	77.50
	Mymensingh	Brahmunberia	Nil	Nil	0.14	0.37	Nil	Nil	Nil	Nil	Nil	0.12	1.84	53.24	64.85
		Kamehanda-	Nil	Nil	0.14	0.37	Nil	Nil	Nil	2	0.51	0.51	?	61.33	?
		pore.	Nil	Nil	0.15	Nil	Nil	Nil	Nil	1	0.15	0.15	?	82.34	?
		Nasirpore	Nil	Nil	0.15	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	62.77	?
	Mymensingh	Bandkandi	Nil	Nil	0.27	0.27	Nil	Nil	Nil	2	0.54	0.54	?	62.99	?
		Kasba	Nil	Nil	0.27	0.27	Nil	Nil	Nil	2	0.54	0.54	?	62.99	?
		Laksham	Nil	Nil	0.27	0.27	Nil	Nil	Nil	2	0.54	0.54	?	62.99	?
		Laksham	Nil	Nil	0.27	0.27	Nil	Nil	Nil	2	0.54	0.54	?	62.99	?
	Mymensingh	Kishoreganj	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.86	79.84	71.99
		Atia (Tangail)	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.86	81.77	87.46
		Mymensingh	Nil	Nil	0.02	Nil	Nil	Nil	Nil	1	0.02	0.02	0.81	97.95	76.90
		Jamulpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.85	86.01	86.78
	Mymensingh	Narainkunge	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1.06	134.47	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	87.43	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	150.28	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	88.17	?
	Mymensingh	Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	87.08	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	87.08	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	87.08	?
		Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	87.08	?
NORTH BENGAL.	Pabna	Pabna	Nil	Nil	0.02	Nil	Nil	Nil	Nil	1	0.02	0.25	0.30	50.45	55.45
		Soraikunge	Nil	Nil	0.02	Nil	Nil	Nil	Nil	1	0.02	0.08	0.80	60.59	64.45
		Soraikunge	Nil	Nil	0.02	Nil	Nil	Nil	Nil	1	0.02	0.08	0.80	60.59	64.45
		Soraikunge	Nil	Nil	0.02	Nil	Nil	Nil	Nil	1	0.02	0.08	0.80	60.59	64.45
	Bogra	Sherpore	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.05	0.44	62.70	66.76
		Noukhilla	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.43	0.43	62.44	66.44
		Bogra	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.05	0.43	62.44	66.44
		Panchibi	Nil	Nil	0.03	Nil	Nil	Nil	Nil	1	0.03	0.10	0.25	66.04	66.69
	Rajshahi	Banulsh	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.41	0.41	66.34	66.11
		Natore	Nil	Nil	0.03	Nil	Nil	Nil	Nil	1	0.03	0.11	0.58	68.95	68.19
		Nagaura	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.45	0.45	67.87	66.28
		Lalpara	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	0.03	?	36.74	?
	Maldah	Manda	Nil	Nil	0.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	?	45.27	?
		Maldah	Nil	0.04	0.01	Nil	Nil	Nil	Nil	2	0.05	0.30	0.27	50.79	52.61
		Chanchal	Nil	0.04	0.01	Nil	Nil	Nil	Nil	2	0.05	0.30	0.12	28.94	57.40
		Gajol	Nil	0.04	0.01	Nil	Nil	Nil	Nil	2	0.05	0.30	?	59.74	?
	Dinagore	Silganj	Nil	0.05	0.04	Nil	Nil	Nil	Nil	2	0.09	0.34	?	52.11	?
		Mohadepore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.11	53.72	57.14
		Churamon	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	51.82	53.25
		Haigunge	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.17	52.57	56.51
	Dinagore	Dinagore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Haigunge	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Thakurgaon	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
		Thakurgaon	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
	Rangpur	Bhawaniganj	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.11	53.72	57.14
		(Gyashanda)	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	51.82	53.25
		Rangpur	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.17	52.57	56.51
		Kurigram	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
	Jalpaiguri	Bagdogra	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		(Niphemari)	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
		Elipara	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
		Elipara	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
	Jalpaiguri	Jalpaiguri	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.11	53.72	57.14
		Alipore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Debaguri	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
		Debaguri	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	?	57.61	?
	Cooch Behar	Bhagatpore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.11	53.72	57.14
		(Nagarkata)	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Dinhat	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Cooch Behar	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
	Darjeeling Hill.	Mukhigunge	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Mukhigunge	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Buxa	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Buxa	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
	Darjeeling Hill.	Siliguri	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Siliguri	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Darjeeling	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Katimgang	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
	Purneah	Kurigram	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Kurigram	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Arrah	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Arrah	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
	North Bhagalpore.	Purneah	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Purneah	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
		Gondwara	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
		Gondwara	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25
	Darbhanga	Solarampore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33
Solarampore		Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25	
Solarampore		Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33	
Solarampore		Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25	
North Bhagalpore.	Katimgang	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33	
	Katimgang	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25	
	Katimgang	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33	
	Katimgang	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.20	61.25	65.25	
Darbhanga	Solarampore	Nil	0.04	Nil	Nil	Nil	Nil	Nil	1	0.04	0.12	0.40	68.33	64.33	
	Solarampore	Nil	0.04	Nil	Nil	Nil	Nil								

Statement of Rainfall in Bengal for the week ending Friday (8 a.m.), the 14th of March 1890—concl.

Meteorological Division.	District.	Station.	RAINFALL.							TOTAL.		Total rainfall since 1st of month.	Average total rainfall from 1st of month.	Total rainfall since 1st of May 1889.	Average rainfall from 1st of May to date.
			Saturday, 8th March.	Sunday, 9th March.	Monday, 10th March.	Tuesday, 11th March.	Wednesday, 12th March.	Thursday, 13th March.	Friday, 14th March.	Number of rainy days.	of rainfall week.				
NORTH BENGAL—continued.	Chharpur...	Mothari...	...	...	...	...	...	...	...	Nil	Nil	0.19	0.26	75.82	...
		Nettiah...	...	...	...	...	...	...	...	Nil	Nil	0.12	0.28	85.00	...
		Banah...	...	...	...	...	...	...	...	Nil	Nil	0.11	?	70.44	...
SOUTH BENGAL	Saran	Barkur...	...	...	...	...	...	...	...	Nil	Nil	0.23	?	61.23	...
		Gopalgunge...	...	...	...	...	...	...	...	Nil	Nil	0.25	0.06	85.75	...
		Chuprah...	...	...	...	...	...	...	...	Nil	Nil	0.11	0.14	64.43	...
	Shahabad	Buzir...	...	...	...	...	...	...	...	Nil	Nil	0.11	0.20	60.55	...
		Shahabad...	...	...	...	...	...	...	...	Nil	Nil	0.20	0.18	67.74	...
		Shahabad...	...	...	...	...	...	...	...	Nil	Nil	0.21	0.21	61.57	...
		Shahabad...	...	...	...	...	...	...	...	Nil	Nil	0.40	0.43	88.50	...
		Shahabad...	...	...	...	...	...	...	...	Nil	Nil	0.25	0.16	80.51	...
	Gya	Arumabad...	...	...	...	...	...	...	...	Nil	Nil	0.07	0.19	48.90	...
		Gya...	...	...	...	...	...	...	...	Nil	Nil	0.20	0.21	35.08	...
		Nowadsh...	...	...	...	...	...	...	...	1	0.08	0.08	0.28	30.67	...
		Jehanabad...	...	...	...	...	...	...	...	1	0.08	0.23	0.18	33.70	...
		Arwal...	...	...	...	...	...	...	...	Nil	Nil	0.15	?	34.49	...
	Patna	Jamunagar...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	30.69	...
		Sherrghati...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	30.29	...
		Rainis...	...	...	...	...	...	...	...	Nil	Nil	0.02	?	17.94	...
		PakriBarguan...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	31.90	...
		Patna...	...	...	...	...	...	...	...	Nil	Nil	0.04	0.11	51.56	...
CENTRAL NAG-PUR.	Monghyr	Deopore...	...	...	...	...	...	...	...	Nil	Nil	0.10	0.22	41.29	...
		Mehar...	...	...	...	...	...	...	...	Nil	Nil	0.19	0.19	36.03	...
		Barrh...	...	...	...	...	...	...	...	Nil	Nil	0.20	?	41.48	...
		Birkram...	...	...	...	...	...	...	...	Nil	Nil	0.20	?	32.54	...
		Hilsa...	...	...	...	...	...	...	...	Nil	Nil	0.28	?	...	...
	South Bhagulpore.	Begowal...	...	...	...	...	...	...	...	Nil	Nil	0.05	0.18	47.75	...
		Monsahy...	...	...	...	...	...	...	...	Nil	Nil	Nil	0.21	30.20	...
		Jamul...	...	...	...	...	...	...	...	Nil	Nil	0.10	?	50.19	...
		Gopri...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	45.23	...
		Shetipara...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	...	...
	Sonthal Pergunnahs.	Bhagulpore...	...	...	...	...	...	...	...	Nil	Nil	Nil	0.16	45.08	...
		Rais...	...	...	...	...	...	...	...	Nil	Nil	0.14	0.21	38.43	...
		Kalgme...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	64.97	...
		Bongson...	...	...	...	...	...	...	...	Nil	Nil	Nil	?	...	...
		Rajmahal...	...	...	...	...	...	...	...	Nil	Nil	0.07	0.20	30.97	...
CENTRAL NAG-PUR.	Hasaribagh	Goda...	...	...	...	...	...	...	...	?	?	0.40	0.70	49.74	...
		Pasoor...	...	...	...	...	...	...	...	?	?	0.04	0.27	37.78	...
		Nya Dohra...	...	...	...	...	...	...	...	?	?	0.18	0.31	57.05	...
		Deognur...	...	...	...	...	...	...	...	?	?	0.05	0.24	40.02	...
		Jamuna...	...	...	...	...	...	...	...	?	?	0.29	0.51	46.61	...
	Lohardugga	Mohagama...	...	...	...	...	...	...	...	?	?	0.00	?	...	...
		Newin...	...	...	...	...	...	...	...	?	?	0.00	?	...	...
		Poonam...	...	...	...	...	...	...	...	?	?	0.17	0.54	30.34	...
		(Girdi)...	...	...	...	...	...	...	...	?	?	0.41	0.43	40.31	...
		Hasaribagh...	...	...	...	...	...	...	...	?	?	0.20	0.74	30.08	...
CENTRAL NAG-PUR.	Singbhoom	Semantur...	...	...	...	...	...	...	...	?	?	0.00	0.02	...	...
		Mahadi Hills...	...	...	...	...	...	...	...	?	?	0.20	0.72	43.40	...
		Jhoomra Hills...	...	...	...	...	...	...	...	?	?	0.07	?	33.03	...
		Barki...	...	...	...	...	...	...	...	?	?	0.23	1.05	47.09	...
		Chakra...	...	...	...	...	...	...	...	?	?	0.11	?	40.05	...
	Mamabhoom	Kargasha...	...	...	...	...	...	...	...	?	?	0.05	?	...	...
		Kamghar...	...	...	...	...	...	...	...	?	?	0.00	?	...	...
		Lohardugga...	...	...	...	...	...	...	...	?	?	0.25	1.60	46.75	...
		Manchi...	...	...	...	...	...	...	...	?	?	0.45	2.25	53.80	...
		Palsow...	...	...	...	...	...	...	...	?	?	0.17	0.94	30.12	...
CENTRAL NAG-PUR.	Singbhoom	Silla...	...	...	...	...	...	...	...	?	?	0.40	?	34.30	...
		Rajmahal...	...	...	...	...	...	...	...	?	?	0.10	0.30	44.70	...
		Hassanabad...	...	...	...	...	...	...	...	?	?	0.21	?	39.43	...
		Gorwah...	...	...	...	...	...	...	...	?	?	0.12	0.64	...	...
		Chigbham...	...	...	...	...	...	...	...	?	?	0.08	0.94	46.70	...
CENTRAL NAG-PUR.	Singbhoom	Chokradhar...	...	...	...	...	...	...	...	?	?	0.08	0.97	...	...
		Ghatella...	...	...	...	...	...	...	...	?	?	0.23	?	80.70	...
		Bakaragora...	...	...	...	...	...	...	...	?	?	0.23	?	54.77	...
		Parulia...	...	...	...	...	...	...	...	?	?	0.20	0.77	44.20	...
		Gobindpore...	...	...	...	...	...	...	...	?	?	0.13	0.53	34.02	...
CENTRAL NAG-PUR.	Singbhoom	Kargasha...	...	...	...	...	...	...	...	?	?	0.61	?	40.23	...
		Gobindpore...	...	...	...	...	...	...	...	?	?	0.04	1.00	40.23	...
		Barabhoom...	...	...	...	...	...	...	...	?	?	0.36	?	51.00	...
		Jhaida...	...	...	...	...	...	...	...	?	?	0.30	?	39.43	...
		Chas...	...	...	...	...	...	...	...	?	?	0.20	?	...	...

Explanation.—Indicates that no rain has fallen. If the return for any day has not been received, the corresponding space is left blank. If any of the are wanting, the corresponding spaces in the total rainfall columns are left blank.

CALCUTTA, the 18th March 1890.

SUMMARY OF THE METEOROLOGICAL AND RAINFALL OBSERVATIONS
TAKEN IN BENGAL FOR THE WEEK ENDING FRIDAY, THE 14TH
OF MARCH 1890.

It has been shown in the report for the previous week that the changes of pressure and of temperature had been decidedly irregular and in many cases rather large. Hence disturbed conditions had prevailed over the greater part of the province of Bengal, and rather numerous local storms had occurred on two or three days, in many instances accompanied by rain. At the commencement of the present week, conditions looked a little more settled, and on the 8th the pressure changes were generally small except over a part of South-West Bengal and Orissa, where there was a rather decided fall. The temperature on this day had risen slowly at most stations by about one to two degrees. Winds on the 8th were generally westerly and south-westerly and light in force, but by the morning of the 9th a decided change had set in, and in many cases at neighbouring stations winds were almost of opposite direction. There had on this day been a rather rapid rise of the barometer at the central stations and a fall to the east and west, while also large and irregular changes of temperature were recorded, pointing to the fact that again conditions were becoming disturbed over the province. That such was the case was shown by the fact that a very considerable series of local storms occurred from the 9th to the morning of the 10th, and rain was reported on the morning of the latter date at almost all stations in Orissa, South-West Bengal, and Chutia Nagpur; the falls in some cases being decidedly heavy. A very rapid fall of temperature took place on the morning of the 10th, and at many stations temperature became from 6° to 10° below the normal. On this day the barometric changes were fairly uniform and pressure was generally falling, but still wind directions were very variable, showing that conditions were still in a disturbed state, and a second series of numerous local storms occurred, so that on the 11th again many stations reported rain. On this date an extremely rapid fall of pressure had taken place, equalling about a seventh of an inch at many of the northern stations, and averaging generally considerably over a tenth, and pressure became so low over North Bengal and North Behar that a distinct barometric depression was almost formed. Again, therefore, on this day conditions were disturbed in Bengal, and local storms were very numerous, and the only district which reported no rain on the 12th was Behar. Conditions continued slightly disturbed on the 12th, and again showers were reported on the 13th; but on this day conditions were a little more settled than they had been for some time previous, and on the 14th only three or four local storms were reported. Even up to the close of the week, however, conditions continued distinctly abnormal, and on the 14th over North Bengal and North Behar pressure was from a fourth to a fifth of an inch below the normal, while generally over the province the defect equalled about a seventh of an inch. Temperature, on the other hand, was from 2° to 3° above the normal over parts of the province, particularly in the northern and central districts, and below it elsewhere, the defects rising up to an average of about two degrees in Orissa. Wind directions, however, had become more steady, and they were generally westerly and south-westerly.

Pressure.—The mean pressure for the week has been very decidedly below the normal, the usual defect ranging between eight and twelve-hundredths of an inch. The defects have been smallest in the south of Chutia Nagpur and Orissa, where they have equalled about seven-hundredths of an inch, and largest in North Bengal and North Behar, where the average defect is about twelve-hundredths of an inch.

Temperature.—Owing to the frequency of local storms with rain, the mean temperature for the month has generally been below the normal, the defect for the province averaging one degree. The variations from the normal have been a little unequal, and while in South-West Bengal and Chutia Nagpur there has been a defect of about two degrees, in North Bengal, Orissa, and East Bengal temperature has either been normal or only slightly below it.

The actual temperatures during the week, the range from day to night, and their variation from their normal values, are seen in the following table, where the average maximum, minimum and mean temperatures at nine typical stations in different districts in the province are given, together with their normal values. It will be seen that the defect has been principally in the day temperatures, which have been as much as from 3° to 5° below the normal:—

Table showing the excess or defect of the actual mean temperature from the normal for the week ending 14th March 1890.

[illegible]